Financial History

The magazine of the Museum of American Finance

A First-Class Catastrophe: The Road to Black Monday

Isaac Newton, Daniel Defoe and the Dynamics of Financial Bubbles

Words of Wisdom: Remarks from the 2018 MoAF Gala

ISSUE 124 | WINTER 2018

FINANCIAL HISTORY

THE MAGAZINE OF THE MUSEUM OF AMERICAN FINANCE

in association with the Smithsonian Institution

Issue 124 • Winter 2018
(ISSN 1520-4723)

Financial History is the official membership magazine of the Museum of American Finance.

MUSEUM OF AMERICAN FINANCE
Smithsonian Affiliate

IN THIS ISSUE FEATURES

IN THIS ISSUE DEPARTMENTS

ON THE COVER

A trader on the floor of the New York Stock Exchange shouts orders as stocks are devastated during one of the most frantic days in the exchange's history, October 19, 1987. See article, page 22.

MARIA BASTONE/AFP/Getty Images

Collections Remain Unharmed as Museum Facility Sustains Flood Damage

Message to Members

David J. Cowen | President and CEO

On January 14, during the Martin Luther King, Jr. holiday weekend, I arrived at the Museum to find it was literally raining inside our space. I raced up the stairs to the Alexander Hamilton Room, where many of Hamilton's original documents are on display, including the *Report on Public Credit*, which is the economic equivalent of the *US Constitution*. Water was on top of the case, but the document was dry. As I started to place large garbage pails under the various rainfalls, I realized that not one of our thousands of precious documents or artifacts was damaged. All three floors of the Museum sustained water damage, our office was partially swamped and our auditorium was flooded, but our archives were dry. The floor above us where the pipe burst was ankle deep before the water was shut off, and yet not one piece of our nation's financial history was damaged. How is that possible? Luck? Fate? A miracle? Probably a combination of all three, along with the diligence of our collections and exhibition teams.

Since then we have been working in crisis mode. Winston Churchill is quoted as saying, "Never let a good crisis go to waste." And we will not, because this is an incredible opportunity.

Last February, at the Museum's annual gala, I shared my thoughts on what a state-of-the-art finance museum could be. Exhibitions would be thematically wrapped around Public, Private and Personal Finance, with a fourth area, "Prototype," that features Alexander Hamilton explaining finance-led growth and free enterprise as the best way. This would be a new way to make the Museum come alive and resonate with our visitors. I envision a hologram of Hamilton saying, "I wrote 16,313 words in the *Report on Public Credit,* and you only need to remember six words describing our national debt: It was the price of liberty." He would continue to explain why we as a country should honor our debts, and why all of us in our business and personal lives should as well. We teach visitors life-long financial lessons. This is the role we play and will continue to play—with unique social relevance.

With our Museum's lease ending in three years, four months ago we wrote more than 65 museums, financial institutions, exchanges and universities to explore a future partnership and to expand our reach and national presence. We have so far heard from 10 that would like to discuss a potential partnership. The flood will likely expedite our discussions. Opportunity abounds.

While there has been damage to our space, the essence of what makes the Museum an important cultural institution endures. The staff, who can illuminate these incredible artifacts and bring finance to the public in an understandable way, is ready for the challenge. We remain as committed as ever to educating the public on the power and importance of finance to the economy and to our everyday lives. With the ongoing support of our Board, as well as our individual and corporate members and the financial community as a whole, we will continue to preserve, exhibit and teach American finance and financial history. $

Please note: All of the Museum's daytime and evening events will proceed as scheduled at off-site locations. For program venue information, as well as updates on the Museum's recovery and reopening, please visit our website at www.moaf.org or follow us on social media @FinanceMuseum.

Elsa Ruiz

David Cowen (center), pictured here with Gala honorees Ken Griffin and Timothy Geithner, updated the Museum's supporters on the status of the Museum after the flood in his remarks at the 2018 Gala on February 6.

Museum Honors Ken Griffin and Timothy Geithner at 2018 Gala

The Museum of American Finance honored the achievements of two financial leaders in both the public and private sectors at its annual gala on February 6, 2018, at Cipriani Wall Street. Approximately 470 people attended the event, which raised over $1.23 million to support the Museum's mission of financial education.

Ken Griffin received the Charles Schwab Financial Innovation Award. Mr. Griffin founded Citadel in 1990 and has since served as the firm's Chief Executive Officer. He also founded Citadel Securities, a leading global market maker, in 2002. The Charles Schwab Financial Innovation Award, inaugurated at the Museum's 2016 Gala, recognizes individuals who have introduced new markets or new financial instruments to our financial system.

The Whitehead Award for Distinguished Public Service and Financial Leadership recognized the significant contributions of Timothy Geithner, the 75th Secretary of the Treasury and the former President and CEO of the Federal Reserve Bank of New York. He first joined the Treasury Department as a civil servant in 1988 and held a number of positions in three administrations. Named after the late John C. Whitehead, former Deputy Secretary of State and Co-Chair of Goldman Sachs, the Whitehead Award recognizes leaders who have demonstrated great achievement in the field of finance and have also served with distinction in the public sphere.

Please see page 6 for excerpts of the remarks delivered at the 2018 Gala. $

1. Ken Griffin (center) accepts the 2018 Charles Schwab Financial Innovation Award from Museum President David Cowen (left) and Chairman Dick Sylla (right).

2. Timothy Geithner, recipient of the 2018 Whitehead Award for Distinguished Public Service and Financial Leadership, delivers remarks at the Gala.

3. Nearly 470 people attended the Museum Gala on February 6.

4. Joe Ricketts, founder of TD Ameritrade, introduces Ken Griffin.

5. Robert Rubin, former Secretary of the Treasury, introduces Timothy Geithner.

6. Guests enjoy the cocktail reception at Cipriani Wall Street.

Photos: Elsa Ruiz

Words of Wisdom

Excerpts from the Remarks Delivered at the 2018 Museum Gala

At the 2018 Museum of American Finance Gala on February 6, the Museum honored Ken Griffin with the Charles Schwab Financial Innovation Award and Timothy Geithner with the Whitehead Award for Distinguished Public Service and Financial Leadership. Excerpts from the remarks delivered that evening are published below in the order in which they were presented.

JOE RICKETTS

Founder, Former CEO and Former Chairman TD Ameritrade

Tonight it's my privilege to introduce Ken Griffin. And I think most of you, if not all of you, know that Ken is really a bright guy. He's a talented leader, and he is a great entrepreneur. And his innovative approach to investments has fundamentally changed the financial sector. Now, he's done a lot of things in his life, and I'm not going to go into a long list of accomplishments that Ken has achieved, but I'd like to tell you about a couple of items.

He was raised in Boca Raton, Florida, where IBM had a plant and was building their first personal computer. IBM hired a lot of people from the city, and there was a lot of buzz about what personal computers were going to do to change our lives. And when Ken was 14, his parents offered him a choice. He could go to high school at a private, exclusive school, or he could go to the public school and have a personal computer. He chose the personal computer. I think that tells a lot about his character.

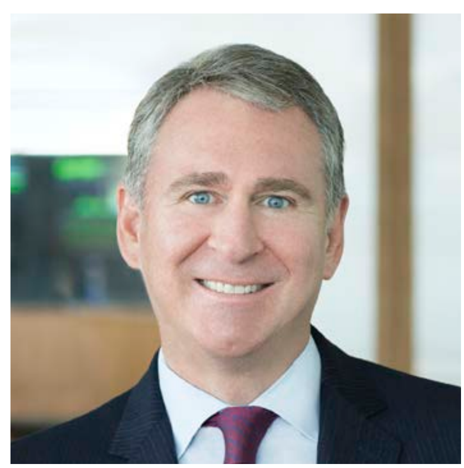
Not too many years later, at age 19, while he was a student at Harvard, in 1987, he was trading stocks in his dorm room. 1987 is many, many years ago—technology was not where it is today—so he had to go to the building manager and make arrangements to put a dish up on the roof, run the wires down through the elevator shaft, and then down the hall to his room. And I'm going to tell you, probably—probably—he used Ameritrade to make his trades. I'm sure that he used Schwab and Scott Trade sometimes, but I'll bet it was Ameritrade most of the time.

At age 22, Ken started Citadel, and he had some clear thoughts about the combination of trading and technology, and he put them into an idea around airplanes. And quants designed the airplane. The technology people built the airplane. The portfolio managers flew the airplane. And the operation area was the air traffic control. So with those fixed ideas in mind and the efficiency that came with the management, Citadel became a place with very clear data, a better risk management system and more precise models, which gave them a competitive edge.

Now, permit me a minute to get on my soapbox. The world needs entrepreneurs. These are the people who take risks. These are the people who bring innovation to the market. And these are the people who create jobs. And, as I've said, Ken is a great entrepreneur. He's created great value, and he has brought many, many benefits to society. On behalf of myself and my family, it's my pleasure and my joy to introduce Ken Griffin.

KEN GRIFFIN

Founder and CEO, Citadel
Founder, Citadel Securities



Joe, thank you for your very kind introduction. I am honored and humbled to follow in your footsteps in receiving the Charles Schwab Financial Innovation Award.

I'd like to recognize David Cowen and his team at the Museum for their commitment to preserving, exhibiting and teaching about American finance and financial history. We are all grateful for your work, which assures future generations will learn from and appreciate finance.

I would also like to congratulate Tim Geithner on receiving the Whitehead Award for Distinguished Public Service and Financial Leadership. Tim's decisive actions played a critical role in protecting our financial system during the Great Financial Crisis. On behalf of all of us gathered here this evening, thank you, Tim, for your public service.

I am truly flattered to be honored this evening as an innovator. It sounds so much sexier than being honored for being a CEO. First, let me observe that Citadel is built upon a foundation laid by those who came before us. The two prior recipients of this award, Charles Schwab and Joe Ricketts, have devoted their careers to laying that foundation.

When Citadel launched its US equities market making business about a decade ago, Ameritrade was our cornerstone partner. And they were a perfect partner. Fair, transparent and demanding. They made us earn our business with them and pushed us to excel. Over a decade later, Citadel is by far the largest market maker in the US equities market and in many countries around the world. And we owe the success of this story to the team at Ameritrade, for being such great partners with us for so many years.

Now, what has been the key to our success over the years — I'll be the first to admit it — I've been at the right place at the right time many times in life. As Joe mentioned, I grew up in Boca Raton, Florida, and he put it very nicely — my parents bribed me. My mom wanted me to go to public school. She wanted me to have the experience of dealing with a very diverse student base. And she said if you go to public school, I'll buy you a personal computer. And I made that trade in a heartbeat.

And in college, I came to believe that the combination of computing power and analytics would empower the trading firms of the future. This was in 1986. And this was the first right place, right time story.

But more than fancy analytics were needed to pursue my dreams. What I needed was capital. And the rise of hedge funds in the '80s and '90s were my path to my future. Access to a group of forward-thinking investors who believed in the power of the alignment of interest between the money manager and the investor. And this is the second right place, right time story that would come to shape my career.

I've been fortunate enough to have been at the epicenter of great changes in our financial markets. But when the history books are written, the celebration of business leaders as innovators often misses the point. Powerful ideas in the absence of execution are worthless. True innovation is about execution, and execution is about teamwork.

In its "Think Different" ad campaign, Apple says the people who are crazy enough to think they can change the world are the ones who do. Chuck Schwab and Joe Ricketts believed they could change the world of finance, and they did.

And like Schwab and Ameritrade, Citadel's story of innovation hasn't been about developing something fun in the lab that no one else has ever thought of. It's been about seeing opportunities and having the conviction to go for them. And most importantly, it's about having an extraordinary team able to execute on great ideas.

And as such, I accept tonight's award not in my honor, but in honor of my team that has stood by me for nearly three decades, a team that time and time again has converted ideas into reality and, in doing so, has both helped our investors reach their goals and dreams and transformed financial markets around the world. Thank you.

ROBERT RUBIN

Former US Secretary of the Treasury

I'm told I'm supposed to say I'm delighted to introduce Tim Geithner, which I am. You have Tim's résumé, and it speaks for a career of really remarkable accomplishment and tremendous public service. What I'm going to try to do is lend a little bit of personal color.

I first met Tim in 1995, days after I came to the Treasury, at a meeting with Larry Summers, then *de facto*, later *de jure*, Deputy Secretary. Larry made his presentation, everybody nodded that they agreed and then a very young-looking fellow across the table raised his hand, said he disagreed and went on to explain why. I thought, well, I'm not going to bother to meet this guy because he ain't going to be around here very long! Then, to my amazement, Larry asked him to explain what he meant. Afterwards, I asked the Treasury veteran what that was all about. And he told me the young fellow's name was Tim Geithner, that Larry thought he was a superstar and that he was, in fact, a superstar. Tim was rigorously substantive and, in his own polite way, spoke truth to power.

I remember once we were in Larry's office trying to decide whether or not to intervene in the yen. The issue was complex and consequential, and I went to my comfort zone and suggested that we defer to preserve optionality. Tim,

however, waited a bit and then said the Japanese markets are going to open in a few minutes, you have to decide now, and we should do this. I resisted, he insisted. I relented, we went ahead. It worked, and of course I took the credit, which was as it should have been.

When in time that young career civil servant became president of the New York Fed and then Secretary of the Treasury himself, Tim set an example for public service — of seriousness of purpose — in the face of tremendous crisis and tremendous media and political pressure. The banks and the investment banks, as all of you well remember, were dealing with potentially dire circumstances. And Tim devised and then implemented his approach of stress tests and recapitalization. The right was furious. They wanted laisse-faire and they wanted the banks to sink or swim on their own. The left was furious. They wanted to fire all the CEOs. Tim, with tremendous fortitude, stuck with his strategy in the face of withering fire, and in my view — and the view of many, many others — saved our country, or at least was indispensable in saving our country from going over the abyss.

Tim's ability to focus on the issues in front of him with rigor and a strong intellect, and to care only about reaching optimal outcomes without being phased by media or political pressure, combined with great and balanced judgment, zero of counterproductive ego, and a strong sense of irony and almost philosophical amusement at the absurdities of life are what made Tim effective in public service.

However, no one is perfect. And this is where I get even for Tim's comment when he introduced me [at the 2016 Museum of American Finance Gala].

Tim sent me an email directing that my introduction should say — and this is, roughly speaking, a quote — "that while growth, job creation and stock market increases, on their face, looked better during my time when I was at Treasury, that this was totally misleading, and that his record was better than mine when the conditions were adjusted to reflect the degree of difficulty and the political circumstances."

That is, of course, an absolutely outrageous view, on the one hand. On the other hand, to give the devil his due, when Tim arrived at the Fed and then the Treasury, we were in fact in the worst financial crisis since the 1930s, and he, along with Hank Paulson and Ben Bernanke, did, I believe, save the country from going over the abyss. So there may be some merit to Tim's point.

In any event, Tim and his approach to all he has done are role models for engagement in public and private sectors. There's a famous question that all of us know, which is: Who would you want to have in a foxhole if you really were in trouble? President Obama's answer was Tim, and that would be my answer, too. Looking forward, Tim remains enormously involved in the world of public policy, while at the same time having a major job in the private sector. And I have no doubt that he will continue to contribute to the well-being of our nation for many years to come. Tim is highly worthy of tonight's honor, and I am delighted to have the opportunity to introduce Tim Geithner.

TIMOTHY GEITHNER

Former US Secretary of the Treasury
President, Warburg Pincus

That was very gracious, Bob. Thanks to all of you for coming tonight and for supporting the Museum. In doing so, of course, you're contributing to one of the key things to help improve the functioning democracy, which is to improve the quality of knowledge people have about finance and economics. And, as you know, we could use some improvement in that knowledge.

I didn't have the chance to work with John Whitehead, but I met him many times, I knew something of his legend and, of course, it's a deep personal privilege to receive an honor named for him.

I first met Ken Griffin — I think it was in the summer of '07 — when we were in a later stage of efforts to try to take some of the risk out of the way derivative markets worked. And he did something that was very important, which is that he came and tried to help us figure out a better set of ideas and a better way to make those ideas practical. And I was impressed with that; grateful for that. And he's right to emphasize that it's not just about ideas, it's about execution.

I want to pay tribute tonight to the public servants with whom I worked and the most valuable things I took away from that experience.

I started as a civil servant at the Treasury when I was 28. I found something at Treasury and then at the Fed that will surprise Americans who have lost faith, or who have little faith, in government still. The people were talented and ethical. They were independent, intrepid. They were smart, curious, careful. They worked exceptionally hard. The culture was excellent. It was meritocratic. Not friendly to peacocks or jerks. It did not reward people who had more conviction than knowledge. The career staff worked in relative obscurity, without seeking public acclaim. The code of the place was to be defenders of the long-term economic interests of the United States and to resist the short-term political temptations of…whatever.

But it wasn't just about being the brakes on bad ideas. The role of the Treasury staff was to find solutions to problems, to be for stuff, not just against stuff. And the Treasury staff was strong, in part, because they were not all powerful. In our system of government, responsibility for economic policy is shared, not just with the Congress, but within the executive agencies and with the Fed. And this meant that, to affect outcomes, you had to be able to

build consensus. You had to understand the perspectives of others. Your influence was mostly a function of the credibility you could earn and by the quality of your ideas. It wasn't enough to believe you were right.

This ability to attract talented people willing to do these jobs is not something you could take for granted. It's a fragile thing. Idealism about public service is vulnerable to the extreme tribalism of our politics and the systematic demeaning of the integrity and competence of public servants. When the experienced and the idealistic leave and the new ones are deterred from coming, you risk long-term damage to the effectiveness of government, at a time when most of the hard things we face can't be solved only by the innovations of the market, but require better policy and more effective execution.

As impressive to me as the people I got to work with at Treasury and the Fed was the approach to policymaking, and decision-making, that I experienced. Bob Rubin ran an exacting and thrilling process of decision-making, and this was true for the President with whom I worked most closely, as well. This approach to choices, to policymaking, to decision-making, was characterized by a relentless search for the best of the bad options, skepticism of the easy or politically expedient choice, a rich debate among a group of people with very diverse skills and experiences, no tolerance for internal politicking, and the encouraging of challenge and dissent. It was safe to admit uncertainty. In fact, humility in the face of what we could not be sure of was the price for a seat at the table. It was a competition for ideas, but without people being paralyzed, frozen, afraid to act.

At the New York Fed, I found a terrifically capable group of people, and of course I had the exceptional fortune of working with Hank Paulson and Ben Bernanke through the most harrowing parts of the financial crisis. We trusted each other. We debated everything. We worked together, not against each other. We approached these choices by honoring the tradition Bob used to call—or still calls—probabilistic decision-making, which involves examining the relative chances of the full range of policy outcomes, including the most forbidding; trying to choose the best policy option, that had the highest expected value, the option that, if you were wrong, still left you with some freedom to change course. His lessons in preserving optionality are legendary.

We tried to honor [President] Roosevelt's imperative in the Great Depression that the country needed bold, persistent experimentation. For me, experiencing this approach to governing made me more optimistic about our country, even in the depth of the crisis. In general, better ideas triumphed over worse ideas. It was valuable skepticism about established precedent, about conventional wisdom, about an openness to argument and respect for experience. Policy mostly bent towards competence.

This approach to governing stood in stark contrast to the way Congress often approached its responsibilities. It was like two different worlds. In the Congressional world, there was a lot of messy, adolescent theatre and partisan division, limiting its ability to act when compromise was necessary.

Among the most important challenges in economic policy are about how to reconcile what makes sense in the long run with what is politically possible or attractive in the short run. But it's also about how to prevent policy from being bent to the service of only private interests or ideological extremes. Measured against these tests, our political system today looks terrible. Troublingly inadequate to the challenges of this messy, dangerous world; pressures of technology; the deep inequalities in opportunity that persist in America; the changing global balance of power; the threat of climate change.

We won't always agree on what's best or fair or moral, but we should try to agree on the means we use to decide what works, and this requires a commitment to look at evidence independent of bias and to rediscover some capacity for compromise. I believe the major economic disappointments over time are not primarily about a failure of ideas; they're mostly a failure of the ability to get the more sensible ideas through a damaged, broken political system.

Of course, it's good to remind ourselves that our political dysfunction has been bad at other points in US history—considerably worse, in fact. Over time, the fevers of political extremism and populism faded generally. The extremists and the incompetent were discredited. The essential pragmatic core of the American political ideal reasserted itself, and capable people were able to do good and consequential things again.

For that to happen, though, we have to protect the essential foundations of competent government. The ability to attract experienced, talented, pragmatic people to public service, and impose on them the highest standards of integrity, and rekindle the flames of an approach to decision-making that reflects the complexity of the world.

Now, this sounds a bit like sentimental nostalgia, but I think it's a realistic, hardheaded assessment of what it takes to have a government that can respond to the many challenges we face. I feel so fortunate to have had the chance to work for my country and to work with such a talented group of people, not least Bob Rubin. I hope many of you will have that chance, too, someday. Thank you. $

MUSEUM OF AMERICAN FINANCE 2018 GALA DONORS

The Museum deeply appreciates the support received from the following generous donors for the 2018 Gala:

PLATINUM
- Citadel
- Citadel Securities

GOLD STANDARD
- Davis Polk & Wardwell LLP
- Fitch Group
- John Herzog
- The Ricketts Family
- Charles Schwab & Co., Inc.
- The Paul E. Singer Foundation
- Warburg Pincus
- WilmerHale

SILVER CERTIFICATE
- Cliff and Laurel Asness
- Capgemini
- Citi
- William H. and Jane P. Donaldson
- Fried, Frank, Harris, Shriver & Jacobson LLP
- Houlihan Lokey
- Carol Kaimowitz
- KKR
- Peter G. Peterson Foundation
- Protiviti
- S&P Global
- The Starr Foundation
- Richard Sylla
- Tishman Speyer

SPONSORS
- Anonymous
- Con Edison
- Bloomberg Philanthropies
- Crystal & Company
- Gabelli Funds
- Gibson, Dunn & Crutcher LLP
- Goldman Sachs
- Martha Clark Goss
- Al and Denise Hurley
- ING Financial Holdings Corporation
- JPMorgan Chase
- Glenn Kaufman
- Moody's
- Nasdaq
- New York Life
- NYSE
- Karen Seitz
- Maria Smith
- TD Ameritrade
- Teigland-Hunt LLP
- Third Point LLC
- Charles V. Wait

DONORS
- Howard Abner
- Bank of America
- Merrill Lynch
- Barrett Asset Management
- Bloomberg for Education
- Carter Ledyard & Milburn LLP
- Cboe
- Andrea de Cholnoky
- Charles Elson
- Flooring Solutions Group LLC
- William Harrison
- Michael Henriques
- Seth Kaller
- Myron Kandel
- Laser Family Foundation
- Marge Magner
- Rodger Riney
- Saybrook Capital
- Walter Shipley
- VanEck
- Taylor Wagenseil

In Defense of Capitalism Part 1: The Problem and a Definition

By Brian Grinder and Dan Cooper

THE VILIFICATION of capitalism is nothing new. Given the abuses of the free market system that led to the Great Recession of 2008, it is not surprising that such criticism has intensified. This criticism is not altogether unwelcome, given the adaptive nature of capitalism. It usually serves to improve the system.

However, concerns about this negative trend are abundant. In a review of Andrew Lo's [watch video] book *Adaptive Markets* for *Financial History* [Fall 2017, pp. 38-39], James Prout writes, "These are difficult days for capitalism and free markets; more pessimistic than I've ever seen." Some, such as Mihir Desai [watch video] and William Cohen [watch video] have risen to defend the financial markets, an integral part of capitalism. In *The Wisdom of Finance*, Desai writes, "This book takes the unorthodox position that viewing finance through the prism of the humanities will help us restore humanity to finance." Likewise, Cohen introduces his book, *Why Wall Street Matters*, by asking:

> Should we be angry that Wall Street seems to be nothing more than a festering, open wound of rampant self-interest and malfeasance? Or should we be happy that Wall Street has become a convenient metaphor that politicians use to park blame for every bad economic thing that has befallen the country in recent years?
>
> Or could it be that Wall Street is something altogether very different? Is Wall Street the left ventricle of capitalism, the brilliantly designed engine that powers innovation, job growth, and wealth creation and that has become the most sustained way by which billions of people the world over have been lifted out of poverty and given a chance at a better, more economically fulfilling life?"

A 2016 Harvard University survey of young people aged 18 to 29 found that 51% opposed capitalism, while only 42% supported it. A poll of millennials from late last year, according to Bloomberg.com, found that 44% of those surveyed would prefer to live in a socialist country, while 42% prefer a capitalist society. A 2015 Reason-Rupe poll found that 58% of college-aged Americans view socialism positively, while 56% view capitalism positively. By comparison, 61% of senior citizens in the same poll had a favorable view of capitalism while only 28% had a favorable view of socialism.

College students have historically tended to be skeptical of capitalism. Disparaging remarks from students about the evils of capitalism and the greediness of capitalists are not surprising in general education classes, such as personal finance. However, when business majors begin to seriously doubt the viability of the capitalist free market system, as they have recently, business and finance professors must take heed, re-examine how they approach capitalism in their courses and take steps to ensure that students understand the history of capitalism and appreciate its role in modern society.

Part of the problem is that capitalism is a vague term. Historian Joyce Appleby reminds us that "Capitalism didn't start as an 'ism.' In the beginning, it wasn't a system, a word or a concept, but rather some scattered ways of doing things differently that proved so successful that they acquired legs."

No one envisioned capitalism and acted on that vision to bring it about. Capitalism did not spring from some profound intellectual theory; it developed pragmatically and organically. The term itself was first used by the opponents of capitalism to describe a system they wanted to end. Some argue that the word should be jettisoned as a description of our economic system, given the historical baggage that accompanies it.

In his three-volume study of civilization and capitalism, Fernand Braudel relates his own struggle with the word capitalism:

> Whether through caution or negligence…I have only used the word *capitalism* five or six times so far, and even then I could have avoided it… Personally, after a long struggle, I gave up trying to get rid of this troublesome intruder. I decided in the end that there was nothing to be gained by throwing out along with the word, the controversies it arouses…if capitalism is thrown out the door, it comes in through the window…As Andrew Shonfield says, 'one…justification for the continued use of the word "capitalism" is that no one, not even its severest critics, has proposed a better word to put in its place.'

19th century critics of capitalism first coined the term. According to Braudel, the term "capitalism" in its modern meaning was probably first used in 1850 by French socialist Louis Blanc, who wrote pejoratively, "What I call 'capitalism' that is to say the appropriation of capital by some to the exclusion of others."

In *Capital: A Critique of Political Economy,* Karl Marx describes a capitalist as follows:

> As the conscious bearer [Träger] of this movement, the possessor of money becomes a capitalist. His person, or rather his pocket, is the point from which the money starts, and to which it returns. The objective content of the circulation we have been discussing — the valorization of value — is his subjective purpose, and it is only in so far as the appropriation of ever more wealth in the abstract is the sole driving force behind his operations that he functions as a capitalist, i.e. as capital personified and endowed with consciousness and a will. Use-values must therefore never be treated as the

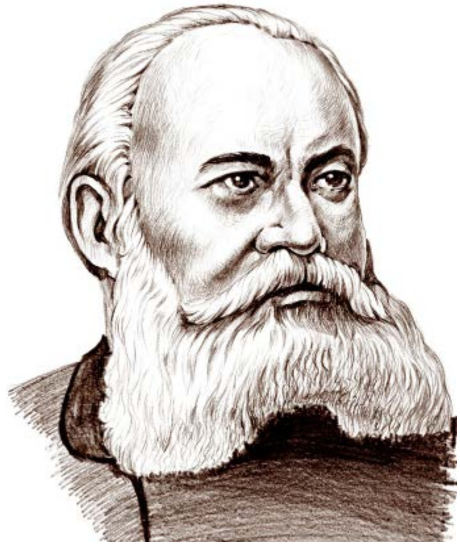
> immediate aim of the capitalist; nor must the profit on any single transaction. His aim is rather the unceasing movement of profit-making. This boundless drive for enrichment, this passionate chase after value, is common to the capitalist and the miser; but while the miser is merely a capitalist gone mad, the capitalist is a rational miser. The ceaseless augmentation of value, which the miser seeks to attain by saving his money from circulation, is achieved by the more acute capitalist by means of throwing his money again and again into circulation.

Of course, it is never wise to leave the definition of a system to that system's opponents. Many who are more sympathetic to capitalism have attempted to arrive at a more satisfactory description. For instance, Appleby defines capitalism as "a cultural system rooted in economic practices that rotate around the imperative of private investors to turn a profit. Profit seeking usually promotes production efficiencies like the division of labor, economies of size, specialization, the expansion of the market for one's goods and, above all, innovation."

Sociologist Rodney Stark suggests that, "Capitalism is an economic system wherein privately owned, relatively well-organized and stable firms pursue complex commercial activities within a relatively free (unregulated) market, taking a systematic, long-term approach to investing and reinvesting wealth (directly or indirectly) in productive activities involving a hired workforce and guided by anticipated and actual returns."

Finally, economist Deidre McCloskey argues that capitalism is "merely private property and free labor without central planning, regulated by the rule of law and by an ethical consensus." She, like Appleby, goes on to point out, "Above all *modern* capitalism encourages innovation."

This is the system that young people are questioning. Unfortunately, those same young people are usually unable to clearly articulate what they mean by capitalism. Thus their arguments against it are usually couched in general terms such as evil, greedy, materialistic or opportunistic. In order for capitalism to evolve, adapt and achieve continuous improvement, its critics must propose well-developed arguments targeting specific deficiencies of the system. They should also suggest ways to correct these deficiencies. Lacking that, the only alternative is to call for an end to the system, which would be tragic.



denisk0

Portrait of Karl Heinrich Marx, who was critical of capitalism and described it as, "…the unceasing movement of profit-making."

The increasing antagonism towards capitalism is troubling. The first step towards resolving this problem is to develop a clear understanding of the issue at hand. The descriptions of capitalism offered by Appleby, Stark and McCloskey provide a good starting point for addressing capitalism's role in our world. In upcoming issues, this column will examine the history of capitalism in order to identify its strengths and weaknesses. We will also consider whether capitalism is by its very nature a transitory economic system that will eventually lead to something better, explore the ethical nature of capitalism and weigh in on the role of government and society in a capitalistic system.

The young people who will shape our economic future need a balanced, informed understanding of capitalism. Emotionally charged calls for ending the system should be taken seriously and met with calm, thoughtful responses. If there is a superior economic system, we should strive to develop it. However, history indicates that the alternatives to capitalism can be dark and foreboding indeed. $

Brian Grinder is a professor at Eastern Washington University and a member of Financial History*'s editorial board. Dr. Dan Cooper is the president of Active Learning Technologies.*

Sources

Appleby, Joyce. *The Relentless Revolution: A History of Capitalism*. W.W. Norton & Co.: New York. 2010.

Braudel, Fernand. *The Wheels of Commerce: Civilization & Capitalism 15th-18th Century, Volume 2*. Harper & Row: New York. 1982.

Ekins, Emily. "Poll: Americans Like Free Markets More than Capitalism and Socialism More Than a Govt Managed Economy." *Reason*. February 12, 2015.

Marx, Karl. *Capital: A Critique of Political Economy*. Penguin Books: London; New York. 1990.

McCloskey, Deirdre N. *The Bourgeois Virtues: Ethics for an Age of Commerce*. University of Chicago Press: Chicago, IL. 2006.

Novak, Michael. *The Spirit of Democratic Capitalism*. Madison Books: Lanham, MD. 1991.

Prout, James P. Review of *Adaptive Markets: Financial Evolution at the Speed of Thought*, by Andrew W. Lo. *Financial History*. Fall 2017. 37–38.

Sedláček, Tomáš. *Economics of Good and Evil: The Quest for Economic Meaning from Gilgamesh to Wall Street*. Oxford University Press: Oxford; New York. 2011.

Stark, Rodney. *How the West Won: The Neglected Story of the Triumph of Modernity*. ISI Books: Wilmington, DE. 2014.

Steverman, Ben. "Get Rid of Capitalism? Millennials Are Ready to Talk About It." Bloomberg.com. November 6, 2017.

Stokols, Eli. "Socialism, Capitalism Seen in New Light by Younger Americans." *The Wall Street Journal*. December 6, 2017.

Yale Joel

WHERE ARE THEY NOW?

Blyth & Co.

"Investment banking is essentially a personal service business, and an investment organization is essentially an aggregation of people."

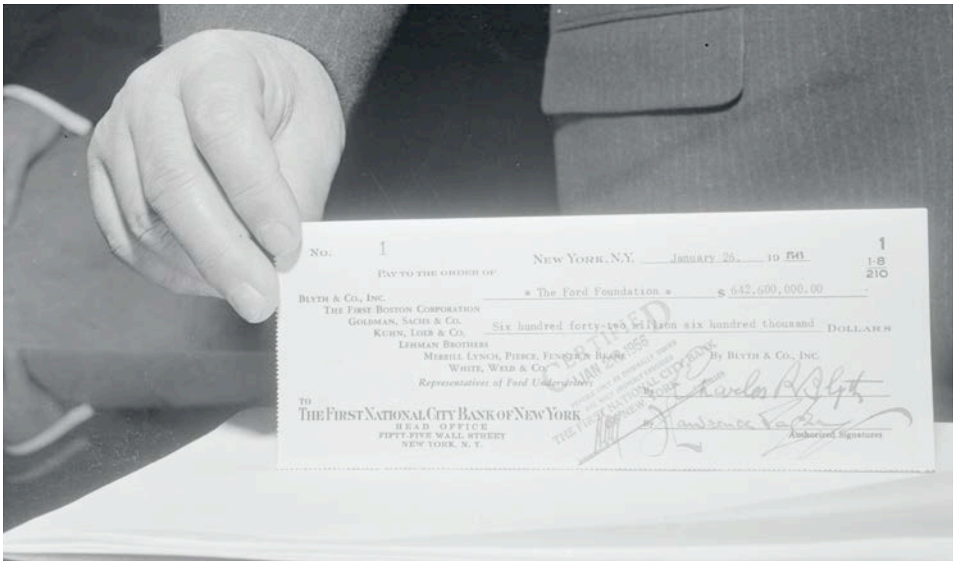
***The Blyth Story* (1964: 103)**

By Susie J. Pak

The origin of Blyth & Co. traces back to the founding of the firm of Louis Sloss & Co., a family partnership whose growth was intimately intertwined with the economic development of the American West. The founders of Blyth & Co. were former employees of Louis Sloss & Co., and Sloss's commercial network served as the base from which Blyth would build its early reputation as a regional investment bank.

A native of Bavaria, Louis Sloss immigrated to Louisville, Kentucky in 1845. Soon after working for his older brother's wholesale grocery business, Sloss was lured

Portrait of the chief underwriters of the Ford stock and Ford Foundation, dated December 12, 1955. Pictured are, from left, George Woods (First Boston Corporation), Charles Blyth (Chairman of Blyth and Company), John M. Schiff (Kuhn, Loeb), Sidney Weinberg (Goldman Sachs), Alexander White (White, Weld), Robert Lehman (Lehman Brothers) and Winthrop Smith (Merrill Lynch, Pierce, Fenner and Beane).



Bettmann

A check for $642,600,000, believed to be the largest ever written for investment purposes to date, was handed over to the Ford Foundation by Blyth and Co., senior member of the underwriters group, which handled the sale of Ford stock to the public, 1956.

by the Gold Rush and traveled to California on horseback in 1849. In 1857, he established a grocery business in Sacramento with Lewis Gerstle, a fellow Bavarian immigrant, who later became his brother-in-law. After the Great Flood of California devastated the city in 1862, Sloss and Gerstle moved to San Francisco to open a stock brokerage firm, and in 1868, the partners expanded their interests after Secretary of State William Seward purchased the territory of Alaska from Russia.

Sloss and Gerstle were aided by Gustave Niebaum, a Finnish immigrant from the Russian empire, who was consul of Russia to the United States and had worked for the Russian-American Company, a chartered Russian firm that had "exclusive trading control over Alaska and Russian America since the late 18th century." With other partners, they created the Alaska Commercial Company and set up a network of trading posts in the territory. Later they obtained a proprietary lease for the seal fur trade from Congress. After the lease expired in 1890, the company expanded into "a variety of enterprises including salmon canneries, a tannery, mines, transportation, utilities and especially land reclamation and speculation in California."

From the time of their arrival in California, Sloss and his partners combined economic activity with social development. They became part of a close knit, influential network of "San Francisco's 'first Jewish families,' sometimes referred to as 'The Gilded Circle.'" After Sloss's death in 1902, Louis Sloss & Co. continued as a family holding company. It was revived in 1909 as an investment bank, an event that was precipitated by the economic development of Sacramento Valley.

The newly-incorporated Louis Sloss & Co., Inc. "went to work chiefly selling first mortgage bonds in the Natomas Consolidated… a gold-dredging company…," in which the Sloss family were principals. Having entered into the relatively unfamiliar territory of bond financing, however, the family decided to bring in new men from outside the family to manage the firm. On the recommendation of the president of the Bank of California, Frank B. Anderson, the family hired Charles R. Blyth and Eugene R. Hallett.

The son of a bank cashier, Blyth was a native of Ohio and a graduate of Amherst College. He began working as a dealer in commercial paper for the Chicago branch of Boston firm George H. Burr & Co. and moved to San Francisco with the firm in 1907. He started with Louis Sloss & Co. in 1909. Blyth was joined by Hallett, who came from the San Francisco branch of N.W. Halsey & Co, a New York bond house founded by Noah W. Halsey at the turn of the century. In due course, the firm hired four men to sell bonds underwritten by the firm: Dean G. Witter, a native of Wisconsin who was raised in northern California, and John D. Hartigan, a Nebraska native, joined the firm in 1910. Two years later, George C. Leib, a Kentucky native, and Roy L. Shurtleff, a California native, were hired. Though from different parts of the United States, Witter, Hallett, Shurtleff and Hartigan were all graduates of the University of California.

Despite hopeful beginnings, the early days of the 20th century were challenging for the firm. According to the company history, the Panic of 1907, the Congressional Money Trust investigation and the passage of the Federal Reserve Act created new scrutiny and regulation for the banking industry, leading the Sloss family to reconsider their business. Further details provided by Roy Shurtleff's oral history in 1982 indicate that the family encountered dire economic difficulties as land development in the Natomas and West Sacramento declined.

In 1914, the Sloss family made the decision to leave investment banking, concentrating their family holdings in their core businesses. Blyth, Witter, Leib, Hartigan and Shurtleff decided to strike out on their own and form Blyth, Witter & Co., specializing in corporate and municipal bonds.

Blyth, Witter & Co. (1914)

Despite the break with the Sloss firm, the new partners were fortunate in that they could build on Sloss's commercial network, which the *San Francisco Chronicle* called "one of the best sales organizations ever built on this coast." Their first large account was for a contact Charles Blyth made while at Louis Sloss & Co.: the Mt. Whitney Power & Electric Company of California. This later led to a "long and valued relationship with the Bank of California." These ties helped the young firm

to weather the storm of World War I and establish its reputation as a leading firm in the financing of the utilities industry in California. During this time, however, the firm encountered some upheaval at the executive level. In 1924, Blyth and Witter had a falling out over the eastern branch offices. Blyth believed "that the company's future was in New York, but Mr. Witter, a confirmed Californian, did not." Witter left the firm and founded Dean Witter & Co. The Blyth firm retained its name until the late 1920s.

Blyth & Co. (1929)

In 1929, right before the Crash, Blyth, Witter & Co. made the decision to open a brokerage business with a seat on the New York Stock Exchange (NYSE). The new brokerage partnership in New York was called Blyth & Co., while the underwriting firm in California was renamed Blyth & Co., Inc. After the Crash, however, the firm suffered serious setbacks. It sold its seat on the NYSE and the brokerage partnership was dissolved. Blyth & Co. merged with an investment trust called Blue Ridge Corporation, which was owned by the Shenandoah Corporation, another investment trust created by public utility magnate Harrison Williams and the Goldman Sachs Trading Corporation, the investment company of Goldman Sachs & Co.

Educated as a bookkeeper and the son of a miller-turned-banker, Williams grew up in Ohio. Over a period of more than 20 years, Williams built a utilities empire through a series of holding companies, similar to that of Samuel Insull, Thomas Edison's former secretary at General Electric. In 1906, he created a holding company called American Gas and Electric Company, and in 1912 he created another gigantic utility holding company called Central States Electric Corporation, which controlled Blue Ridge, among other firms. He was introduced to Blyth's principals through Hugh Baker, the president of National City Company, the securities affiliate of the National City Bank of New York (Baker later became the head of Blue Ridge Corporation, 1940–45). After the merger, the firm was called Blyth & Co., Inc.

The Depression years were challenging for the firm, as they were for the financial community overall. Blyth & Co. did not escape unscathed, as the demise of their investment trusts demonstrates. But Blyth & Co. benefited from the "vacuum… created by the retirement from business of the security affiliates of the banks" following the passage of the Glass-Steagall Act (1933) and the Securities Exchange Act (1934). By 1934, Blyth & Co. was able to repurchase the 49% interest that Blue Ridge invested in the firm's capital, which turned out to be fortunate for the firm because Williams's financial dealings were investigated in 1937 for not having revealed large losses in the 1929 Crash. Williams' estate was subsequently successfully sued by Blue Ridge's investors after the War.

In 1935, Blyth invited Charles E. Mitchell, Baker's replacement at National City Company, to become chairman of the board. The son of a merchant, Mitchell was a Massachusetts native and a graduate of Amherst College like Blyth. He started out working for a utility company in Chicago before joining the Trust Company of America in New York in 1906. In 1911, he opened his own firm, C.E. Mitchell & Co., and in 1916 he joined the National City Company. He was named president of National City Bank in 1921.

Mitchell was no doubt a controversial choice, given that he had been skewered by the press and by Congress during the Congressional hearings on the securities industry in 1932–33 known as the Pecora Hearings. During the investigation, "it was disclosed that [Mitchell] had made illegal stock transactions, speculated in his own bank's securities, and engaged in income tax evasion." In 1938, he had to pay back the US government $1.4 million. Within the financial community, however, Blyth & Co. believed that Mitchell retained a high level of support and that his chairmanship, which he maintained for 20 years, would expand the national network and reputation of the firm.

It appears that Blyth & Co. was successful in climbing the ranks of the investment banking community because by 1948, when the Justice Department began an investigation of price fixing in underwriting syndicates for violating the Sherman Anti-Trust Act, the firm was identified as one of the 17 top investment banks in the country. Blyth & Co. was subsequently investigated in *United States v. Henry S. Morgan et al* (1948), which was certainly a source of stress, but the ordeal ironically added to the firm's prestige.

Blyth & Co.'s status was further cemented in 1956 when it entered into negotiations with the Ford Foundation to co-manage the sale of one-third of the Foundation's holding in Ford Motor Company's common stock, the largest offering of its size up until that point in American history. Though Goldman, Sachs & Co. was the leading dealmaker on the Ford sale, the Foundation's board of trustees finance committee chose Blyth & Co. to "act as chairman of the co-managing group."

Blyth & Co.'s West Coast origins appear to have assisted it in capturing the coveted role of the syndicate chairman. H. Rowan Gaither, Jr., Ford Foundation's president, who was himself a California native, stated "that one of the Foundation's chief objectives [was] 'to achieve the widest possible distribution of the shares to the public.'" The Ford offering signaled that Blyth & Co. had achieved a national reputation, but it also took place at a turning point in the firm's history.

The Last of the Founders

Since 1914, Blyth & Co. had been led by its core group of founders and executives, but by the mid-1950s they began to leave the firm. Though he lived to know of the Ford deal, Mitchell died in 1955. Then, in 1958, Charles Blyth retired from the presidency and became the chairman of the board. When he died the following year, the other founders stepped in: Leib took Blyth's place and Shurtleff became chairman of the executive committee.

As the founders left, Blyth & Co. promoted from within — men who started in the firm's branch offices and had been with the firm for a period of decades. Despite the firm's ability to draw on internal talent, however, the exodus of founders and executives had a negative impact on its capital position. According to Shurtleff, when the founders left the business, "there wasn't enough capital left in the business to keep it a thriving concern." This loss also took place at a time when even more capital was necessary to compete effectively in the post-War economy. By the late 1960s, it was clear that like many others, Blyth & Co. needed more capital.

INA Corporation (1970)

In 1970, Blyth & Co. made the controversial decision to merge with INA Corporation, an insurance holding company created in 1969. INA was the main owner of the

PROSPECTUS

10,200,000 Shares

Ford Motor Company

Common Stock

($5 Par Value)

The shares of Common Stock offered by this Prospectus are to be purchased by the Underwriters from The Ford Foundation (the "Selling Stockholder"), subject to the issuance of such shares pursuant to a reclassification, as more fully set forth under SELLING STOCKHOLDER and RECLASSIFICATION OF STOCK. No part of the proceeds of sale will be received by Ford Motor Company.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION NOR HAS THE COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The Company has applied for the listing of the Common Stock on the New York and Detroit Stock Exchanges.

	Price to Public	Underwriting Discounts and Commissions (1)	Proceeds to Selling Stockholder (2)
Per Share	$64.50	$1.50	$63.00
Total	$657,900,000	$15,300,000	$642,600,000

(1) The Selling Stockholder has agreed to indemnify the several Underwriters and certain other persons against certain civil liabilities, including liabilities under the Securities Act of 1933.

(2) Before deduction of expenses payable by the Selling Stockholder as set forth under SELLING STOCKHOLDER.

The shares of Common Stock offered by this Prospectus are offered subject to their delivery to, and acceptance by, the Underwriters, and the right of the Underwriters to reject orders in whole or in part. It is expected that the shares will be ready for delivery on or about January 26, 1956.

Blyth & Co., Inc.

The First Boston Corporation

Goldman, Sachs & Co.

Kuhn, Loeb & Co.

Lehman Brothers

Merrill Lynch, Pierce, Fenner & Beane

White, Weld & Co.

The date of this Prospectus is January 17, 1956.

Insurance Company of North America, "the oldest American stock fire and marine life insurance company" in the United States, founded in Philadelphia in 1792. Its acquisition of Blyth reflected its desire to diversify into the financial services business, which was a relatively unfamiliar area for the firm's management. INA's chairman and CEO was John T. Gurash, an Oakland native, who spent the majority of his career in the insurance industry. At the time of the merger, Gurash stated, "This move emphasizes INA's plans to engage in the financial services business on a truly sophisticated basis."

As a result of the merger, Blyth found itself at the center of an ongoing controversy at the NYSE regarding the public ownership of brokerage firms. Blyth had rejoined the NYSE in 1965, but because NYSE's rules prohibited "public ownership of member firms," Blyth & Co. had to resign as a result of the INA acquisition. After the merger, Blyth & Co. recorded two years of deficits, which was attributed to losing its membership in the NYSE. The firm also continued to experience turnover at the executive level. By 1972, INA "[lost] confidence in and [was] apparently dissatisfied with its investment in Blyth." It decided to merge "its Blyth subsidiary with another investment firm, Eastman Dillon, Union Securities Co., to form Blyth Eastman Dillon & Co. Inc."

Blyth Eastman Dillon & Co., Inc. (1972)

Eastman Dillon, Union Securities was itself the result of a 1956 merger between Eastman Dillon, a Philadelphia investment banking house founded in 1912, and Union Securities, the investment company of private bank J&W Seligman & Co., founded in 1939. Like Blyth & Co., Eastman Dillon, Union Securities believed the merger would help them "achieve economies of scale" in order to reduce overhead costs and take advantage of the capital by institutional investors. In July 1974, Blyth Eastman Dillon "closed 10 of its 55 offices," including six offices in California. Two months later, it closed eight more.

Changes were also made at the executive level. At the time of the merger, Willard S. Boothby, Jr., a Philadelphia native and Lehigh graduate, who was the president of Eastman Dillon, became president and CEO of the newly-combined firm. Paul Conley, a Chicago native and Loyola University graduate, who had started at the Blyth Chicago office in 1934, was named chairman. Frank L. Mansell, a University of Nebraska and Harvard Business School graduate, who was with Lee Higginson Corporation before going to Blyth in 1952, became vice chairman. Then, in 1974, James F. Cleary, who had been with Eastman Dillon Union Securities since 1951, took over as president and COO. Conley retired that year. Boothby took his place as chairman. With the exception of Mansell, by the early 1970s, the leaders of the Blyth firm were all former members of Eastman Dillon.

In 1975, a change in leadership also took place at Blyth Eastman Dillon's parent company. That year, Ralph S. Saul, the former co-chief executive of First Boston Corporation and former president of the American Stock Exchange, became chairman and CEO of INA Corporation. Born in Brooklyn, Saul graduated from the University of Chicago and Yale Law. He later said that when he joined the firm, "INA needed to be turned around. It needed waking up." In 1978, Saul recruited Alvin V. Shoemaker, a Wharton and University of Michigan law graduate, from First Boston to be president and chairman of the operating committee.

Blyth Eastman Paine Webber (1980)

Since 1973, rumors had circulated that Blyth Eastman Dillon was considering a merger with Paine Webber, Jackson Curtis, Inc., the brokerage unit of Paine Webber, Inc., "one of Wall Street's largest brokerage and investment-banking firms." At the time, INA and Paine Webber's chairman and CEO, James W. Davant, denied those rumors. But in 1979, with Blyth Eastman Dillon still incurring quarterly losses, INA Corporation decided "to sell its interest in Blyth Eastman Dillon," making Paine Webber Inc. the majority partner of a newly-named firm: Blyth Eastman Paine Webber.

By merging with Blyth Eastman Dillon, Davant had hoped to put "Paine Webber on par with the biggest Wall Street players." Unfortunately, the merger did not end well. Paine Webber experienced "massive operational problems" that stemmed from issues in reconciling Blyth Eastman Dillon and Paine Webber's processing systems. These problems led not only to a SEC censure, but also to significant financial losses.

The company's troubles were exacerbated by another round of personnel defections that had happened very soon after the merger. According to *The New York Times*, "when the firm's top executives found out that the company was sold from under them, they were outraged. An enormous talent drain followed."

Mansell continued as chairman and chief executive of the new Blyth Eastman Paine Webber, but Boothby, the chairman of Blyth Eastman Dillon, retired in 1980. In 1981, Shoemaker returned to First Boston to become chairman of the executive committee. Davant stepped down as chief executive of Paine Webber, Inc. in 1980 and as chairman in 1981.

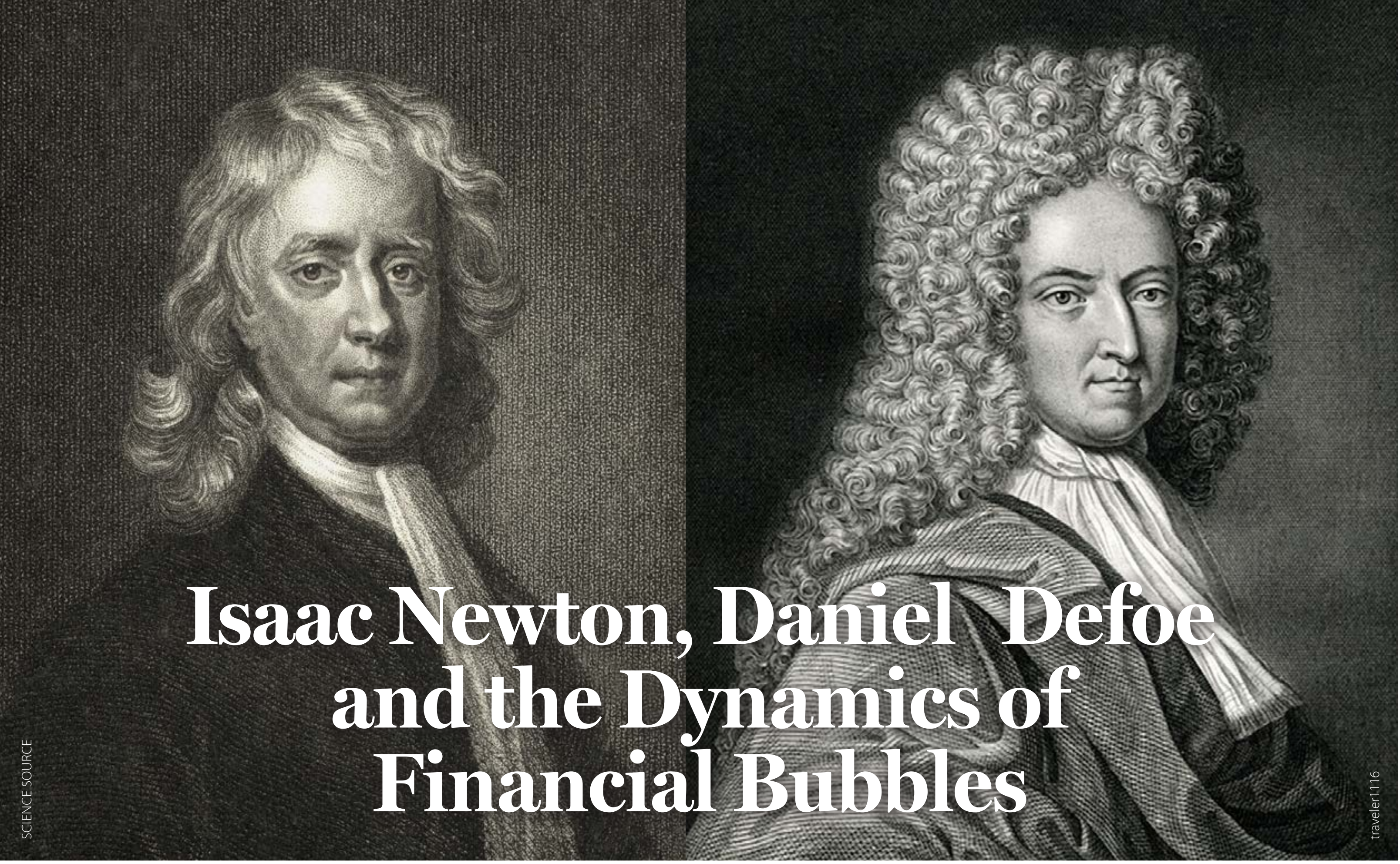
Davant's replacement was Donald B. Marron, a New York native and graduate of the City University of New York, who had joined Paine Webber Inc. after selling "his former firm, Mitchell Hutchins, to Paine Webber in 1977." Under Marron's leadership as chairman and CEO, the firm responded to the operational crisis by cleaning "up its back office and [cutting] expenses by chopping its work force by hundreds."

The reorganization continued in 1984 when Paine Webber merged "three major operating subsidiaries — Paine, Webber, Jackson & Curtis; Paine Webber Mitchell Hutchins and Blyth Eastman Paine Webber… into one operating subsidiary, to be called Paine Webber," later called Paine Webber Group. At that time, Blyth's name was erased from the company, and the history of the bank came to an end. $

Susie J. Pak is an Associate Professor in the Department of History at St. John's University (New York). A graduate of Dartmouth College and Cornell University, she is the author of Gentlemen Bankers: The World of J.P. Morgan *(Harvard University Press), a Trustee of the Business History Conference, co-chair of the Columbia University Economic History Seminar and a member of the editorial advisory board of the* Business History Review. *She is also a member of the* Financial History *editorial board.*

Prospectus for the Ford Motor Company IPO, showing 10,200,000 shares at a value of $5 each. Blyth & Co. Inc. is listed first as the lead underwriter.

Isaac Newton, Daniel Defoe and the Dynamics of Financial Bubbles



By Andrew Odlyzko

A famous anecdote tells of Sir Isaac Newton realizing large gains in the early stages of the South Sea Bubble, but then losing all that and more by buying back in at the top. On the other hand, the fact that the author of *Robinson Crusoe* was also associated with that episode of extreme investor exuberance is little known. And that is a pity, since Daniel Defoe's words, as well as Newton's actions, are very illuminating about an important aspect of bubbles that deserves much more attention. This is the social network element, involving information dissemination among investors. What did they know, how did they know it, how accurate was what they thought they knew and how did they interact with each other?

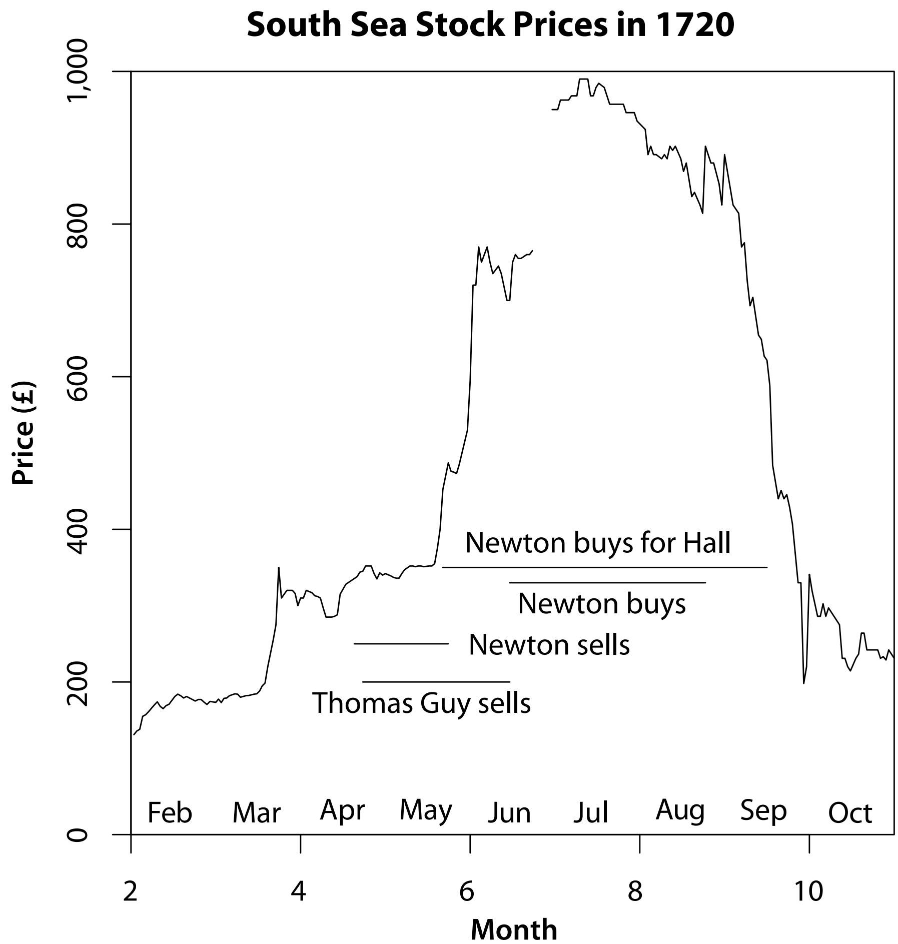
The South Sea Bubble of 1720 had all the essential ingredients that make investing today challenging: political turmoil, rapid globalization, business innovation, new communication technologies with an abundance of "fake news" and novel financial products that befuddled investors. Those securities might seem simple to us, but this has to be considered in proper historical context. The public was less educated than today, and there was far less of both finance theory and of general information about business and the economy.

On the eve of the South Sea Bubble, Britain was beginning to enjoy the fruits of the peace that came after the long and debilitating War of the Spanish Succession. It was widely ranked with Holland as a world leader in technological and commercial development. International trade was booming, but not without controversy. Weavers were rioting against the imports of inexpensive Indian textiles, and one of Defoe's many jobs was writing a newspaper set up by the weavers to push their case for protection. Politics was extremely partisan, with widespread suspicions and accusations of treason. Some were well-founded, as there had been a major Jacobite invasion in 1715, and a smaller uprising in 1719, both aiming to restore the Stuart dynasty.

Today the traditional press is in decline, and social networks and related upstarts are beginning to dominate. We are forced to grapple with the issues of "echo chambers" and "filter bubbles," which produce the "post-truth" phenomenon of different groups having wildly divergent perceptions of what reported events mean. This is often blamed on the overabundance of information. However, similar phenomena can be found three centuries ago, in an era of information scarcity. This can be observed in politics, as well as in reactions to the South Sea Bubble.

Like today, information systems were being revolutionized. The press was undergoing rapid development, following the removal of some of the shackles of government censorship two decades earlier. London was full of a variety of publications, as entrepreneurial publishers strove to find profitable niches, often by catering to political parties, or the government, that paid them secret subsidies. Yet the commercial newsletter sector, distributing large numbers of hand-duplicated copies, continued to thrive and served as an essential feed for the press, especially for the provincial press that was in its infancy, with just a handful of papers.

Portraits of Sir Isaac Newton (left) and Daniel Defoe (right), both investors in the South Sea Company.



We can monitor the torrents of information that flow through traditional news media, as well as some modern systems such as Facebook and Twitter. But we have limited ability to understand those flows, and we have only a vague sense of what goes over some other media, such as encrypted chat sessions. We face similar hurdles when studying the South Sea Bubble. We do have large collections of printed material from that period, as well as a few personal letters and the like. However, all available accounts argue that a key role in the transmission and collective processing of information at that time was played by coffee houses. That is where people gathered to read the papers, gossip and analyze what they had heard. We have very little knowledge about how this operated. Thus, just like today, we have to make do with fragmentary information on how investment decisions were made.

Having to deal with shadowy fragments of reality does not mean we cannot obtain enlightening insights from comparisons of the events of three centuries ago with today. One feature that appears to characterize bubbles is greatly increased gullibility among investors, as well as policy makers. As I write this article in early 2018, we observe initial coin offerings (ICOs), in which investors rush to throw their money at promoters who rarely offer business plans, much less plausible ones. The similarity to the South Sea Bubble story of a company "for carrying on an undertaking of great advantage, but nobody to know what it is" is striking. (It has to be said that while the 1720 story appears embellished from its apocryphal origins, it does not exaggerate too greatly the promotional atmosphere of that time.) What this suggests is that we might perhaps be able to develop a measure of public gullibility that might serve as a warning sign of bubbles, just as high levels of debt do.

While there is already extensive literature on the South Sea Bubble, much more can be learned about that episode. The standard accounts tell us about the bribery and fraud committed by the South Sea Company, its manipulation of the market, the price record and many other colorful aspects of this multisided affair.

In particular, they include the British government's successful efforts to suppress some of the extremely embarrassing facts after the crash through diplomatic pressure on Austria. But there is far more that can be learned, in particular about the activities of individual investors, the information that was available, how it was used and, in most cases, how it was not used.

The newspapers and pamphlets from that period have already been mined by previous investigators, but not completely. And there are sources that have barely been scratched. Those include complete records of trading in many of the main securities on the London market. They also include a substantial body of modern publications about the history of the British press and the history of English literature.

Many of the famous literary figures from that period, such as Daniel Defoe, Jonathan Swift, Richard Steele and Alexander Pope, were involved in the South Sea Bubble, either as investors or as propagandists. Since they were literary figures, they wrote extensively, unlike people in finance, who typically left few traces. Further, since they are now famous, their writings have been studied intensively. What we can do is to exploit those works from a financial history point of view.

Here we briefly discuss some of the historical nuggets that have been uncovered recently, primarily about Daniel Defoe, Isaac Newton and Thomas Guy. Defoe has not attracted much attention in financial history. But his economics, that in *Robinson Crusoe* as well as his other profuse writings, has already been studied. He was an extraordinarily prolific and versatile writer. His works are especially valuable because he had a very modern mindset, in terms of how he viewed and described the world. This led historian G.M. Trevelyan to entitle the chapter on the early 18th century in one of his books as "Defoe's England," in recognition of this writer's value in creating and describing that era. Unlike most of his literary contemporaries, Defoe was keenly interested in commerce and finance, based on personal experience in those areas.

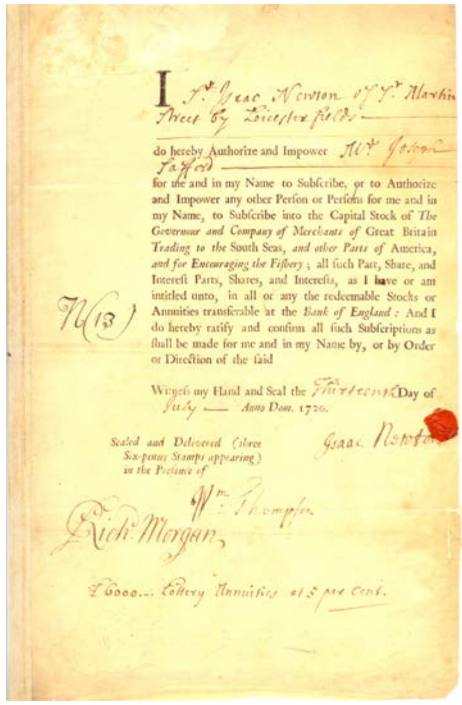
Defoe appears to have played a role, possibly a very important one, in the

creation of the South Sea Company, which was at the center of the bubble. Contrary to popular reputation, this venture at its start in 1711 was a very innovative financial experiment that turned out to be extremely successful. Essentially, it converted a large volume of British government short-term debt into long-term bonds. It continued prospering through the 1710s, and it was only the Bubble of 1720, portrayed in the price chart, that gave it the notorious reputation it still carries. During the earlier halcyon days of the 1710s, the South Sea Company attracted many solid investors, such as Newton and Guy. In addition, investors in the South Sea Company who did nothing during the bubble emerged from that episode with significant profits, as there was a substantial Ponzi element to this scheme.

At the end of 1719, Defoe wrote *The Chimera*, a strong critique of John Law's Mississippi Scheme. This was the first large-scale financial bubble in history. (The Dutch Tulip Bulb Mania of the 1630s was more of a tempest in a teapot.) It was then reaching its height in France, and Defoe pointed out its many defects and warned of its instability. He contrasted Law's visionary experiment with the solidity of British finance. However, the apparent flourishing of Law's venture, and its success in relieving France of the burden of its giant national debt, inspired Britain to attempt a similar feat via the South Sea Company.

From the beginning of 1720, Defoe ran *The Commentator,* a newspaper that was likely subsidized by the government. He continued to attack Law's French scheme and was vociferous in his condemnation of the various visionary London schemes, such as a company "For extracting Silver from Lead." He called them various names, such as a "lunacy" caused by the "bubble infection."

However, he was supportive, with only minor cautions, of the South Sea project, which had most of the financially dubious features of Law's venture. Defoe claimed it compared to the Mississippi Scheme like "a real Beauty and a painted Whore." In retrospect, it is easy to argue that the Mississippi Scheme had far greater chances of success than the South Sea venture, as it was launched in a richer country and had a larger scope (as well as being inspired


I Sr Isaac Newton of St Martins Street by Leicester fields

do hereby Authorize and Impower Mr Joseph Safford

for me and in my Name to Subſcribe, or to Authorize and Impower any other Perſon or Perſons for me and in my Name, to Subſcribe into the Capital Stock of *The Governour and Company of Merchants of* Great Britain *Trading to the* South Seas, *and other Parts of* America, *and for Encouraging the Fiſhery*; all ſuch Part, Share, and Intereſt Parts, Shares, and Intereſts, as I have or am intitled unto, in all or any the redeemable Stocks or Annuities transferable at the *Bank of England*: And I do hereby ratify and confirm all ſuch Subſcriptions as ſhall be made for me and in my Name by, or by Order or Direction of the ſaid

N (13)

Witneſs my Hand and Seal the Thirteenth Day of July — *Anno Dom.* 1720.

Sealed and Delivered (three Six-penny Stamps appearing) in the Preſence of

Isaac Newton

Wm Thompson

Richd Morgan

£6000... Lottery Annuities at 5 per cent.

This 1720 letter documenting one of Isaac Newton's South Sea Company investments was on view in the Museum's 2008 exhibit, "Art of the Exchange."

and run by a truly innovative economic thinker, John Law). But that was not how Defoe presented the situation.

The Commentator folded just as the bubble was collapsing in September 1720. A month later, Defoe was put in charge of *The Director*. This paper was devoted exclusively to the South Sea affair, and it may have been set up by those directors of the company who were not in the inner clique, to deflect blame from themselves. Defoe mounted a valiant but doomed effort to support the market price of South Sea securities, and in the last issue of this paper presented a laughable account of just how much the taxpayers had saved as a result of the bubble.

Exactly what Defoe thought privately is impossible to say, as what he wrote in the cited papers was clearly in line with his sponsors' desires. Furthermore, it is extremely difficult to determine which of the works from that period may be attributed to Defoe. Almost everything he wrote was published anonymously, including *Robinson Crusoe*.

The citations in this article are taken from works that are overwhelmingly accepted as by Defoe. However, there are also strong attacks on the South Sea project in other papers that are sometimes claimed to be by Defoe. The attributions there are less certain, but not impossible, as he was known to employ his talents simultaneously on several sides of an issue. With more research, we might obtain more clarity on the positions that Defoe took on the South Sea project.

Half a dozen years after the collapse of the bubble, in his book *The Complete English Tradesman*, he placed the blame for the debacle on investors in general: "Avarice is the ruin of many people besides tradesmen; and I might give the late South-sea calamity for an example, in which the longest heads were most over-reached, not so much by the wit or cunning of those they had to deal with, as by the secret promptings of their own avarice."

One of those "longest heads" was Newton, who, in addition to his scientific accomplishments that were widely celebrated, was the Master of the Royal Mint and a respected and effective civil servant. Unlike Defoe, Newton has left very little written record of his views on investments. However, he was a very wealthy person, and the records of his financial moves provide a more eloquent and trustworthy testimony to what he really thought, as he was disposing of his money and that of an estate of a friend.

In the past, the anecdote of his cashing out early and then getting back in at the top of the South Sea Bubble was supported by just half a dozen solidly documented figures and a couple of stories written down a generation or two after his death. Recently, substantial additional information has been gathered, based primarily on the records of Newton's trading in securities other than those of the South Sea Company, and also on the detailed records of investments of the estate of Thomas Hall, where Newton was one of the executors.

The picture we obtain of Newton's investments is still incomplete, and likely to remain so. But it is rather convincing and suggests that at the beginning of 1720, Newton had around 40% of his considerable wealth (comparable, based on average earnings, to around $30 million today) in South Sea stock, which can be thought of as a book-entry equivalent of shares. This stake had been acquired over some years, mostly at considerably lower prices.

But then, as the bubble was inflating, in April and May 1720, he sold most of that, at prices that were three to four times his cost. This liquidation appears to have stretched roughly over the period shown in the price chart. However, a few weeks after the last of those sales, in mid-June 1720, he appears to have jumped back into the market, at prices about double those at which he had sold. He then continued making further investments for himself until the end of August, just before the collapse of the bubble.

Newton's misadventures in the South Sea Bubble are of interest not just because of his fame. He represented an apparently very small fraction of investors, namely those who were initially skeptical of the bubble to the extent of selling out, yet eventually yielded to the groupthink that moved the vast majority of investible funds in Britain into the hands of the South Sea Company.

There were numerous other skeptics who held to their views, and some of them realized large profits. Probably the most famous example is Thomas Guy, whose name is immortalized in the name of the hospital he founded largely with the profits from the bubble. As with Newton, the outline of the widely-accepted story is correct, but recent studies of Guy's investment books show some previously unknown twists to it.

Guy started liquidating his South Sea stock holdings, about five times larger than Newton's, at about the same time as Newton. Guy completed his sales at almost the same time that Newton started buying again, as is shown in the price chart. It turns out that later he did make some purchases, but this appears to have come from motives different than Newton's. Guy had not only sold out his South Sea holdings, but also sold some call options, and his purchases were meant to cover those short sales. The losses he sustained were substantial, but they were only a fraction of his gains.

Overall, Guy appears to have had the correct view of the bubble from the start, and he never wavered. His market timing was not perfect, as he sold his South Sea stock at an average price of £420, only about half the peak value it reached afterwards. Also, his sales of call options would have been very profitable, had the expiration date been a month later, as by that time market prices were cratering. Still, Guy did make big profits, as he had bought in over the years at less than a quarter of his sale price, and his short sale losses were moderate. His reputation as a sagacious financier who successfully rode the South Sea Bubble is well deserved.

We do obtain some hints of what may have caused Newton's switch from a skeptic to an ardent believer in the bubble. Just as he was completing the sales of his own holdings, he executed what were, in effect, purchases for the Hall estate, and those are marked in the estate records as having been carried out at the request of Francis Hall, the principal beneficiary of that estate. This was followed by some more purchases for that estate, again after calls from Francis Hall, and then a big move of Newton's own funds into South Sea stock. There had to be vigorous debates among all the executors and Hall about the prospects of the South Sea venture, with Hall likely the most fervent enthusiast. Those debates, together with the rapidly-rising market price, apparently led Newton to change his mind.

It should be noted that Newton did become a truly ardent believer in the bubble, more ardent that other people in his circle, even though he started out as a skeptic and was slow to change his views. The Hall estate made some purchases of South Sea stock as late as the middle of September, when prices were in a free-fall and about half their peak level. However, this estate did keep a substantial fraction of its assets in a more stable investment, that of the Bank of England. On the other hand, Newton appears to have put all of his assets into South Sea stock.

The near coincidence of the dates when Guy and Newton starting selling their South Sea holdings may be purely accidental. There is no evidence that they had any direct interactions, although when Newton sold his government securities in mid-June to invest again in South Sea stock, Guy was among the purchasers, likely through a broker. But this coincidence may reflect common reactions to the same new information they received.

Prices of South Sea stock had been mostly stable for almost a month when Guy and Newton started selling. However, several pamphlets appeared just around that time, with very negative evaluations of South Sea prospects. Perhaps Guy and Newton were reacting to those skeptical arguments. On the other hand, prices did not vary much at the time those publications appeared, so if Guy and Newton were motivated by them, they were in a minority.

These stories illustrate the various courses of action taken by investors in the South Sea Bubble. There is far more that can be done along similar lines, and the hope is that additional investigations will teach us more about the information flows during the South Sea Bubble. Ideally this will provide insights into the general dynamics of bubbles. $

Andrew Odlyzko has had a long career in research and research management at Bell Labs, AT&T Labs and, most recently, at the University of Minnesota, where he built an interdisciplinary research center and is now a professor in the School of Mathematics. He has written over 150 technical papers and is currently concentrating on financial history and technology bubbles. All of his recent papers are available at http://www.dtc.umn.edu/~odlyzko/.

Sources

Anderson, Adam. *An Historical and Chronological Deduction of the Origin of Commerce, from the Earliest Accounts to the Present Time.* Vol. 2, A. Millar, 1764. See https://books.google.com/books?id=JANYAAAAcAAJ.

Carswell, John. *The South Sea Bubble.* 2nd edition. Alan Sutton. 1993.

Chancellor, Edward. *Devil Take the Hindmost: A History of Financial Speculation.* Farrar, Straus, and Giroux. 1999.

Dale, Richard. *The First Crash: Lessons from the South Sea Bubble.* Princeton University Press. 2004.

Neal, Larry. '*I Am Not Master of Events': The Speculations of John Law and Lord Londonderry in the Mississippi and South Sea Bubbles.* Yale University Press. 2012.

Odlyzko, Andrew M. "Bubbles, Gullibility, and Other Challenges for Economics, Psychology, Sociology, and Information Sciences." *First Monday.* Vol. 15, No. 9. September 2010. See http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3142/2603.

Odlyzko, Andrew M. "Newton's Financial Misadventures in the South Sea Bubble." See https://ssrn.com/abstract=3068542.

A FIRST-CLASS CATASTROPHE

By Diana B. Henriques

Sometime before 8:30 am on Monday, October 19, 1987, New York Stock Exchange Chairman John Phelan asked a secretary to track down Leo Melamed, chairman of the executive committee at the Chicago Mercantile Exchange, which traded the wildly popular futures contracts that were pegged to the Standard & Poor's 500 stock market index. Phelan, who had cut his vacation short and flown home on Saturday, could see how the day was shaping up, and it made even the worst fears of Friday night look optimistic.

Traders were predicting the Dow could drop that morning by at least 9%, a staggering percentage figure that was twice the record-setting 108-point loss on Friday, October 16, and almost within reach of the historic daily losses in October 1929. Tokyo had fallen sharply overnight, as traders reacted to Friday's epic decline in New York. The Hong Kong markets had plunged so far and so fast that officials there decided to close their doors completely, to forestall total panic and widespread defaults. London was already down 10%, in part because of $90 million worth of sell orders from the trading desk at Fidelity Investments in Boston. Fidelity's $9 billion Magellan Fund was the largest stock mutual fund in the country; it was chilling to think how much it would try to sell when the Big Board opened.

The New York Stock Exchange's DOT system, which automatically delivered orders to the trading floor, was being swamped with orders, many of them apparently from index arbitrageurs, who profited by exploiting differences in the price of a stock index and the price of the futures contract pegged

A trader on the floor of the New York Stock Exchange shouts orders as stocks are devastated during one of the most frantic days in the exchange's history, October 19, 1987.

to that index. Specialists downstairs on the NYSE trading floor were struggling to find a price at which they could open trading in their blue-chip stocks, a task that suddenly had become as difficult as dealing with a deluge of closing bell orders.

Phelan connected with Melamed and briefed him on the viciously lopsided orders piling up in the DOT system. "We're seeing 'sell' orders like never before," Phelan said, adding, "It looks like a very bad market." And then, he said, "Everyone loves a free market, but we need to slow volatility on the down side. If no action is taken, the industry stands to lose something it wants."

It's not clear what Phelan thought Melamed could do about the market's wild swings. The portfolio insurers — giant institutional investors who used futures contracts to hedge against falling stock prices — were going to sell, no matter what the local traders did in the S&P 500 futures pit. And if such selling made the futures contracts in Chicago cheaper than the cash market for the stocks on the NYSE, the index arbitrageurs would keep dumping stocks and buying futures.

Neither Melamed nor Phelan could prevent that from happening so long as these two linked markets were open. Then Phelan checked his calendar: a young White House aide was scheduled to visit that day, and Phelan planned to show him around; he expected to be back in his office around noon.

Many of the other men who would have to cope with the day's developments, some of them still new to their regulatory duties, were scattered from Sweden to Venezuela.

Federal Reserve Chairman Alan Greenspan was at his Washington office on Monday, but was packed for a midday flight to Dallas. David Ruder, chairman of the Securities and Exchange Commission, also was in his Washington office, but he had been in it for barely ten weeks, and his more experienced aide, Trading and Markets Director Rick Ketchum, had taken a 6:45 AM shuttle to New York. Treasury Secretary James A. Baker III was on a flight to Stockholm, by way of Frankfurt. White House chief of staff Howard Baker had never before dealt with a financial crisis from the Oval Office. And New York Federal Reserve Bank President E. Gerald Corrigan was in Caracas.

• • •

In a foggy rain, John O'Brien, one of three partners in LOR Associates, the firm that had first devised and marketed the portfolio insurance hedging strategy, followed the curves of Route 18 out of the mountains north of San Bernardino. It was around 7 AM, Pacific time, on Monday, October 19. He had spent the weekend helping his wife unpack at their new home at Lake Arrowhead. About halfway down the mountain, he turned on the car radio for the news. The stock market had opened sharply lower, and was still falling. Feeling a jolt of concern, he pulled up to a roadside restaurant and called the office from its pay phone. He recalled later being told the market was off 200 points; there were lots of calls from worried clients. He got back in the car, speeding south and west toward Los Angeles, still an hour away.

The market had not yet opened in New York when Berkeley professor Hayne Leland, one of O'Brien's two partners, boarded a 6:30 AM flight to Los Angeles. Before the plane took off, a flight attendant announced that the market was down 60 points—"serious, but less than catastrophic," Leland thought. When he landed, he got in a cab and asked the driver to turn the radio to the stock report. The market was down hundreds of points by then. "Oh God," Leland said. The taxi wove through the growing traffic to the First Interstate Tower.

Up north in Marin County, the third LOR partner, Berkeley professor Mark Rubinstein, called a taxi when the market decline hit 200 points, and headed for the airport. He got to the LOR offices in Los Angeles around 10 AM (1 PM in New York), just as the stock market was chewing up the last of a fragile hour-long rally.

Leland was already there, hovering anxiously around the firm's harried trader, who had telephone receivers in both hands and a computer monitor in front of him showing the growing disaster. In Chicago, he and other portfolio insurers had been selling for the last hour in larger volumes than they had all morning.

Around 11 AM (2 PM in New York), the trader looked up at Hayne Leland. "I'm getting behind," he said. He still needed to sell even more heavily in Chicago to carry out the hedging strategy, he added, "but I think the market would go to zero if I did that."

Shocked, Leland instantly replied, "No! Don't do that!"

• • •

Alerted by his staff to the morning's selloff, New York Fed president Jerry Corrigan immediately booked a seat on an earlier flight home from Caracas, and spent the time before he left for the airport


"All the News That's Fit to Print"

The New York Times

NEW YORK, TUESDAY, OCTOBER 20, 1987 — 30 CENTS

STOCKS PLUNGE 508 POINTS, A DROP OF 22.6%; 604 MILLION VOLUME NEARLY DOUBLES RECORD

U.S. Ships Shell Iran Installation In Gulf Reprisal

Offshore Target Termed a Base for Gunboats

WORLDWIDE IMPACT

Frenzied Trading Raises Fears of Recession — Tape 2 Hours Late

Does 1987 Equal 1929?

Front page of *The New York Times* on the day following Black Monday, October 20, 1987.

Collection of the Museum of American Finance

MARIA BASTONE/AFP/Getty Images

James Marshall

A commuter reads the *New York Post's* rundown of the 1987 Stock Market Crash.

making calls to New York and Washington from an office in the presidential palace, where he had been scheduled to have breakfast.

In Chicago, the S&P 500 futures pit had opened on time, and the tension was fierce. The subdued crowd in the normally seething pit was smaller than usual. Melamed waited for the opening bell and saw the opening price. At first, he couldn't believe it. The spooz (the traders' nickname for the popular contract) had dropped 7% on the first trade, a staggering decline.

"There were blank stares. No one could believe it was happening. Some people began to leave the pit," a senior Merc trader later recalled.

Portfolio insurers sold more than three thousand spooz contracts in the first thirty minutes, and the futures price seemed to be falling more steeply than the S&P index itself.

This was an illusion. When Chicago opened at 8:30 AM (9:30 AM in New York), many of the S&P 500 stocks had not yet actually started trading on the floor of the NYSE because there were no buyers. In that interval, the S&P 500 index was being calculated with stale prices from Friday, making the stocks seem far more expensive than the futures contracts—far more expensive, in fact, than they actually were.

Nevertheless, index arbitrageurs began their familiar dance, with a slight but devastating variation. As usual, they sold stocks heavily in New York, and in the first 90 minutes, the Dow dropped 208 points, more than 9%, the loss predicted for the entire day. However, instead of immediately buying the S&P 500 futures, a number of index arbitrageurs held back, waiting for even lower prices in Chicago. And by not buying, of course, they helped guarantee that prices in Chicago would continue to fall.

By 11 AM in New York, most of the stocks on the Big Board were open for trading, and there was a brief rally. After 40 minutes, though, it was snuffed out. With the S&P 500 futures still dropping in Chicago, the Dow now sank under wave after wave of sell orders from all kinds of professional investors — mutual fund managers, index arbitrageurs, and Wall Street's own proprietary trading desks.

By then SEC Chairman David Ruder had returned to his office from the Mayflower Hotel after giving a half-hour speech at a conference there sponsored by the American Stock Exchange.

Needless to say, it had been an uneasy audience; people were slipping out to the pay phones in the hall to check on the market. The SEC chairman had been surrounded by a scrum of journalists the minute he stepped from the podium. They pressed him to know if any steps had been taken to close the plunging market—perhaps because, two weeks earlier, Ruder had given a speech saying that a brief trading halt might be wise during a disorderly market collapse. With professorial caution, he told them that no discussions had been held but "anything is possible… There is some point, and I don't know what that point is, that I would be interested in talking to the NYSE about a temporary, very temporary halt in trading."

Trading halts in individual stocks were the cornerstone of Phelan's last-gasp plan to preserve the exchange. He had

mentioned the plan in a call with Ruder that morning, and described it months earlier in a magazine article. At that point, however, Phelan himself had not suggested closing the exchange as a whole. A more experienced regulator than Ruder likely would have been more cautious about even mentioning the issue in public at such a stressful moment. After 15 minutes of questions, Ruder hurried out to his waiting car.

Upon returning to his office, he almost immediately got a call from Rick Ketchum. Ketchum had raced downtown to the NYSE following his early appearance at a conference in Midtown Manhattan and had met with Phelan moments after the Big Board chairman wrapped up a meeting with the CEOs of the biggest Wall Street firms.

Ketchum said Phelan had told him that the executives "didn't seem to have any inkling of how bad the situation really was."

• • •

The computer monitors on the credenza behind corporate pension fund manager Gordon Binns's desk on the 25th floor of the General Motors Building in Manhattan were as bleak as anything he had ever seen — it was already a market crash on a par with 1929.

Binns, who ran the massive GM retirement fund, may have thought back to his childhood in Richmond, to a powerful story his mother had told him about finding a little slip of paper in their basement, on which their worried housekeeper had carefully itemized every penny of her tiny $12 budget.

His mother, already pinched by the gathering Depression, had sat on the basement steps and wept at her housekeeper's far more desperate plight. She resolved that the family would do everything they could to avoid letting the woman go in the hard times ahead. Binns, a public-spirited man, had been raised to think of others.

He never talked about the decisions he made that dark Monday afternoon, but the facts are intriguing. On his fund's behalf, Wells Fargo Investment Advisors had been sending enormous sell orders to the Big Board's DOT system all morning, every hour on the hour. Instead of selling futures contracts in the disorderly spooz pits in Chicago, the firm had started selling the actual stocks out of GM's vast $33 billion portfolio, in thirteen separate transactions of 2 million shares each, for a total of almost $1.1 billion.

Collection of the Museum of American Finance

Photograph of a Quotron screen from Black Monday, October 19, 1987.

Specialists on the NYSE trading floor would never forget that relentless bombardment. One regulator recalled how a specialist had described it to him: "Boom, another sell order, then boom, another sell order, like it would never stop."

At 2 PM, for some reason, it stopped. The portfolio insurance specialists at Wells Fargo never conceded any concern; top executives at that firm would argue for decades that portfolio insurance was an innocent scapegoat in this crisis. It is unlikely that the hedging sales required for GM's portfolio had been completed by 2 PM, with no need for further selling. Indeed, by one account, Wells Fargo had another 27 million shares to sell for GM before the closing bell.

Nevertheless, at 2 PM in New York — the same hour that LOR's chief trader in Los Angeles was worrying that the markets would "go to zero" — this specific barrage of sell orders hitting the NYSE just… stopped.

• • •

A little after 1 PM, a newswire sent out a story reporting Ruder's comments about a "very temporary" trading halt. In the next hour, the Dow fell 112 points. The SEC quickly denied discussing any closure of the exchange, but the uncertainty was enough. Index arbitrageurs stopped buying in Chicago, afraid they would not be able to execute the other side of their trades if the Big Board closed. As a consequence, the gap between the cash index and the futures price now widened to unprecedented — indeed, unthinkable — levels.

Panic was flickering in the eyes of traders in New York and Chicago. The alarmed gossip hurtling between the two trading floors was becoming as dangerous as the investment strategies tying them together. No trading halt could unplug this lightning-fast rumor mill. Both markets dropped further and further, under selling from all quarters. By 2:30 PM, the Dow's loss, about 13%, had eclipsed the worst day of the 1929 crash. The market was falling into history now, and no one knew where the new bottom would be.

New Jersey's state pension fund manager, Roland Machold, had $6 billion worth of South Africa–related stocks that he was obligated to sell before the middle of 1988, under New Jersey's anti-apartheid divestment law. His staff had regularly been selling between $100 million and $200 million worth of stock a day. "Our

MARIA BASTONE

A New York Stock Exchange trader reacts to the Crash of 1987.

The Philadelphia Inquirer

Vol. 317, No. 112 · Tuesday, October 20, 1987 · Thirty-Five Cents

Dow Dives 508.32 Points In Panic on Wall Street

Navy blasts Iran oil site in retaliation

Billions lost in trading

Front page of *The Philadelphia Inquirer* the day of after the crash, October 20, 1987.

noses were to the South African grindstone," he later recalled. But Machold had grown increasingly wary of the market and had put the cash from these sales into safer investments.

Sometime after 2 PM on Monday, October 19, one of his colleagues came into his Trenton office and told him what was happening at the NYSE. He hurried to the room that served as the fund's trading desk. In one corner was a small Knight Ridder newswire printer, perched on a flimsy tripod, spewing out four-inch-wide strips of newsprint with barely an eye blink between updates. The market was down almost 300 points.

Machold looked at the individual stock prices spooling out of the machine. He instantly asked, "How much cash do we have?" His team found about $200 million that could be quickly deployed, and they started trying to get through to brokers to buy some of the dirt-cheap blue chips going begging. Working against the clock, they put the whole $200 million to work, plucking up bargains as fast as they could.

They were the bargain hunters the Berkeley professors who had designed portfolio insurance had been counting on to take the other side of the trades required by their hedging strategy. But with no way of knowing that the avalanche of sell orders was coming, Machold's team had limited time and limited cash, compared to the giant institutions lining up to sell at any price. "Nothing would slow that market," Machold said. As the clock's hand moved toward 4 PM, the market dropped like a bouncing boulder, smashing through the 300-point loss line, plunging past the 400-point loss line. A strange hilarity seized Machold and his staff. They began to perversely applaud each new negative milestone, even though it meant their own stock portfolio's value was shrinking.

When the index was down 492 points, it bounced back up a bit—and the little squad in the trading room groaned. Then, in a final rush, the Dow broke the 500 level and finished down a staggering 508 points. "We all cheered," Machold said. "What else could we do?"

When Phelan saw his Washington visitor out the door and returned to his desk in the early afternoon, the Dow was already down a historic 200 points. Then, as he watched, the market simply "melted away." At the close, the Dow stood at

1,738.74 points; it had fallen 22.6% since the opening bell. That was twice as bad as the worst day of the fearsome 1929 crash, and the point loss was almost five times worse than Friday's epic decline. In its speed and scale—an unprecedented 604 million shares had been traded, twice as many as on Friday—it was the most apocalyptic one-day crash the market had ever seen. Monday, October 19, 1987, would thereafter be known as Black Monday. $

Diana B. Henriques is an award-winning financial journalist and the author of A First-Class Catastrophe: The Road to Black Monday, the Worst Day in Wall Street History; The Wizard of Lies: Bernie Madoff and the Death of Trust, *a* New York Times *bestseller; and three other books on business history. As a staff writer for* The New York Times *from 1989 to 2012 and as a contributing writer since then, she has largely specialized in investigative reporting on white-collar crime, market regulation and corporate governance.*

This article was adapted from *A First-Class Catastrophe: The Road to Black Monday, the Worst Day in Wall Street History*, by Diana Henriques (Henry Holt and Co., 2017).

Sources

Author's Interviews with William J. Brodsky, E. Gerald Corrigan, Richard Ketchum, Hayne Leland, Roland Machold, Leo Melamed, Amanda Binns Mellar, John O'Brien, Mark Rubinstein and David S. Ruder.

Archives of *The Chicago Tribune*, *The New York Times*, *The Wall Street Journal*, the SEC Historical Society, the Chicago Mercantile Exchange and the New York Stock Exchange, as well as the private archives of Dr. David S. Ruder, Northwestern University Law School.

Henriques, Diana B. *Fidelity's World: The Secret Life and Public Power of the Mutual Fund Giant.* New York: Scribner. 1995.

Kyrillos, Barbara. "Leland O'Brien Rubinstein Associates Incorporated: Portfolio Insurance," in *Cases in Financial Engineering: Applied Studies of Financial Innovation*, edited by Scott P. Mason, Robert C. Merton, Andre F. Perold and Peter Tufano. Upper Saddle River, NJ: Prentice Hall. 1995.

Mackenzie, Donald. *An Engine, Not a Camera: How Financial Models Shape Markets*. Cambridge, MA: MIT Press. 2006.

Melamed, Leo, with Tamarkin, Bob. *Escape to the Futures.* New York: John Wiley & Sons. 1996.

Metz, Tim. *Black Monday: The Catastrophe of October 19, 1987…and Beyond*. New York: William Morrow and Company. 1988.

Phelan, John J., Jr. "October 1987: A Retrospective." 2007. Used with permission from the SEC Historical Society.

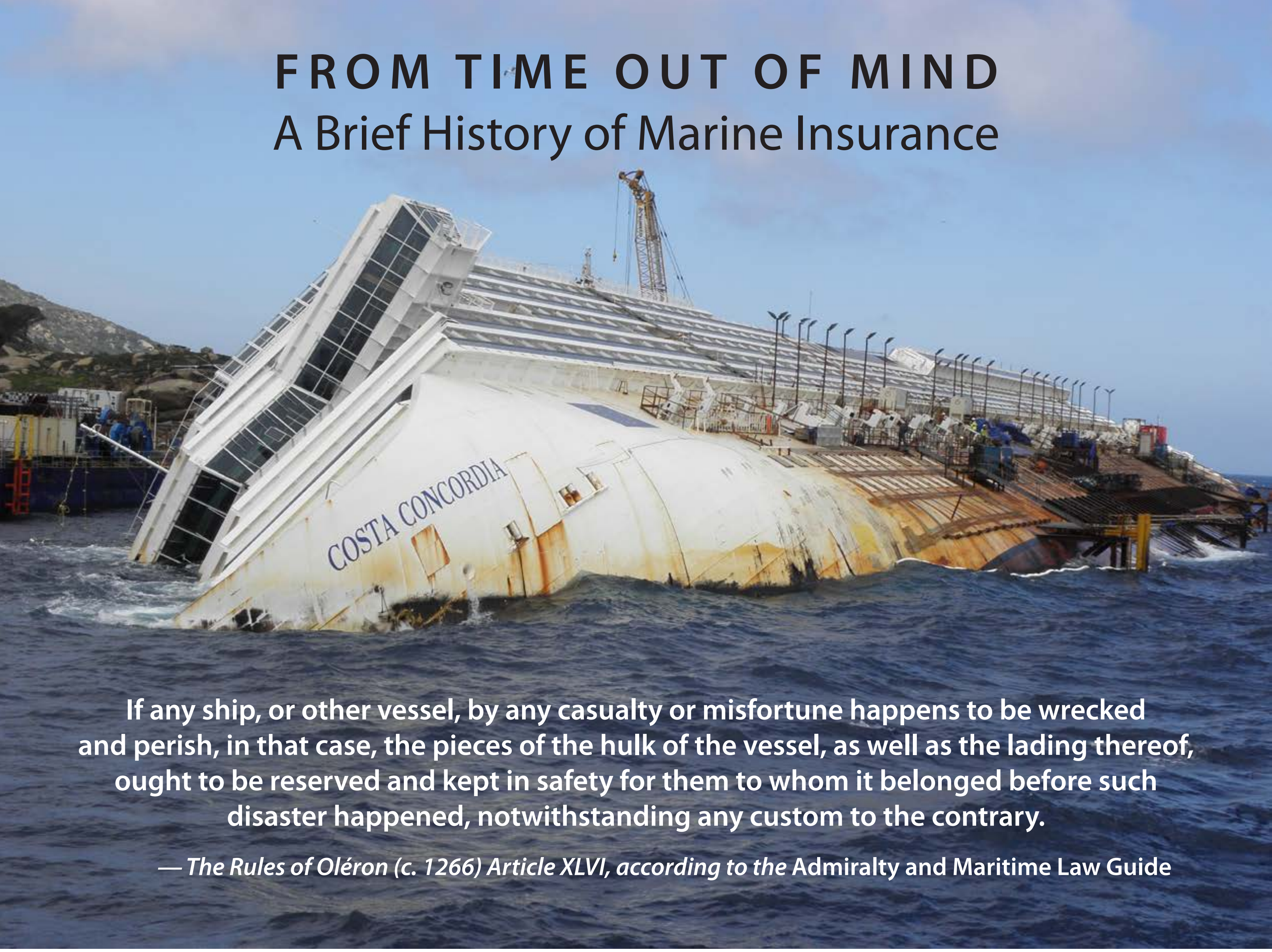
Presidential Task Force on Market Mechanisms. *Report of the Presidential Task Force on Market Mechanism.* Washington, DC: US Government Printing Office. January 1988. (More commonly known as the *Brady Commission Report*.)

Staff of the Division of Market Regulation of the U.S. Securities and Exchange Commission. *The October 1987 Market Break*. Washington, DC: SEC. 1988.

Tamarkin, Bob. *The Merc: The Emergence of a Global Financial Powerhouse*. New York: Harper Business. 1993.

FROM TIME OUT OF MIND

A Brief History of Marine Insurance



Costa Concordia, owned by the world's largest cruise line, Carnival, hit rocks close to the island of Giglio off Tuscany in January 2012, killing 32 people. The captain, who fled the sinking ship, was convicted of manslaughter. The salvage — righting, removing and scrapping the ship; as well as paying damages and environmental restoration — cost $2 billion and took more than two years.

If any ship, or other vessel, by any casualty or misfortune happens to be wrecked and perish, in that case, the pieces of the hulk of the vessel, as well as the lading thereof, ought to be reserved and kept in safety for them to whom it belonged before such disaster happened, notwithstanding any custom to the contrary.

— The Rules of Oléron (c. 1266) Article XLVI, according to the **Admiralty and Maritime Law Guide**

By Gregory DL Morris

Financial history has most often been taken to be the history of money, banking and lending, and stock markets. Fair enough, but insurance deserves equal billing. It is a widely-held belief by insurance professionals and researchers that marine insurance — hull and cargo specifically — are the oldest forms of insurance. Some date early forms of those to Phoenician traders whose heyday of trading colonies around the Mediterranean began around 1200 BC. The French port of Marseilles was among the farthest west, founded around 600 BC.

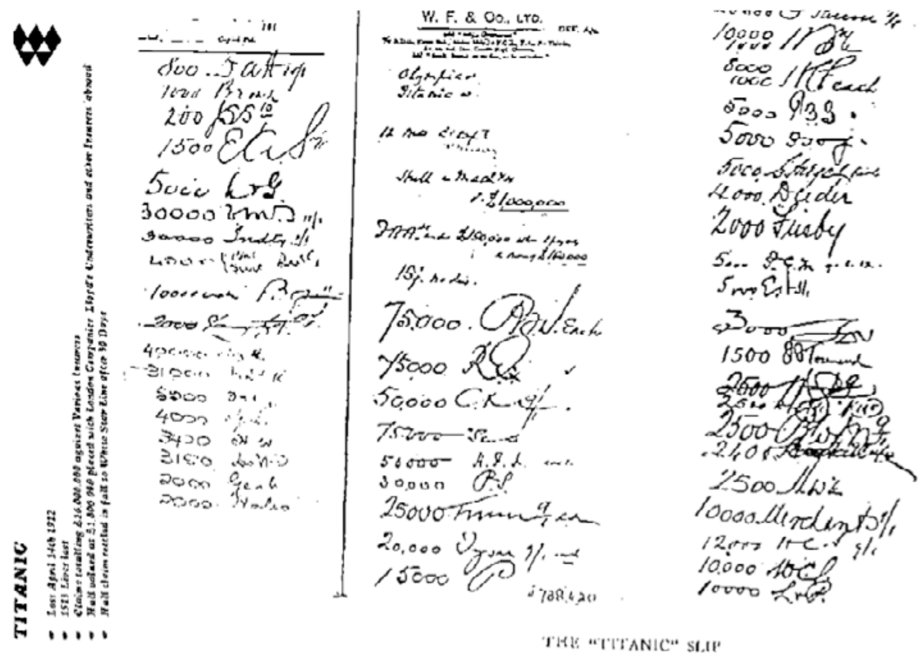
Trade over those distances, with voyages lasting weeks and months, clearly involved risks greater than local trade, terrestrial or maritime. The history of business has been driven by the need to concentrate capital. That also means a concentration of risk. The history of insurance has been driven by the concurrent need to transfer and diffuse those concentrated risks.

A prize document in financial history has long been the oldest-known share certificate, representing stock in the Dutch East India Company, dated 1606. But marine insurance has that beat by two and a half centuries.

"The first formal marine insurance policy that we would recognize today as such was from 1350," said Rod Johnson, director of marine risk management at RSA Global Risk, a major UK underwriter. He also sits on the loss-prevention committee of the International Union of Marine Insurers.

"Marine insurance is based on agreed levels of uncertainty," Johnson explained. "The owner of the vessel and the shippers of the cargo know where the vessel is supposed to go, but they don't know exactly where it is or what it is doing at any moment. Neither do the insurers."

Those earliest formal policies built on the earliest attempt at international maritime law. According to *Medieval Maritime Law from Oléron to Wisby: Jurisdictions in the Law of the Sea*, by Edda Frankot (University of Groningen/University of Aberdeen), "the most famous medieval



The insurance "ticket" signing off on the loss of the *Titanic.*

Willis Towers Watson

sea laws are probably the Rôles d'Oléron (or *Jugemens de la mer* [Judgments of the Sea]), which are named after a small island off the coast of the medieval duchy of Aquitaine." They are also known as The Rolls or Rules of Oleron.

"They were drawn up in French in or shortly before 1286 and contain regulations for the wine trade from Brittany and Normandy to England, Scotland and Flanders," Frankot wrote. "The two oldest extant manuscripts containing the Rôles, both from the early 14th century, are of English origin. A mention of the laws in a report written in the 12th year of Edward III's reign (1329) confirms that the laws were in use in England in the first half of the 14th century. In France, the Rôles d'Oléron had been adopted as the official sea law by 1364."

There is evidence of insurance-like risk-transfer agreements from Amsterdam in 1598, Antwerp in 1555 and Barcelona in 1484. And indeed, *Marine Insurance: Origins and Institutions, 1300–1850* (Adrian Leonard ed. 2016) cites a 1601 quote from Sir Francis Bacon (1561–1626) that marine insurance had existed from "time out of mind."

While it is happenstance that centuries-old ephemera such as stock certificates or contracts have survived to provide original source material today, court records are meticulously kept. According to Robert Merkin, et al. in *Marine Insurance Legislation* (5th ed. 2014), "There are reports of marine insurance cases coming before the English courts in the 16th and 17th centuries, and it is clear from the early cases that the courts were prepared to enforce marine policies according to their terms."

The early concepts in marine insurance developed first by practice, then contract, inevitably litigation and finally legislation. They stress the difference between human causes and natural causes ("acts of man" or "acts of God"). Even that, which might seem to be a bright-line difference, got quickly murky. A storm is obviously an act of nature, but failure to steer away from a storm, or to secure the vessel against wind and waves, are just as obviously human failings.

It should also be noted that merchants and mariners are among the least likely business persons to resolve matters by litigation and legislation. Intervention by civil and criminal authorities leads to regulation and taxation, both of which limit profitability. The distaste was mutual, that is courts and governments felt the limitations of their jurisdiction and of their expertise in nautical matters and early global trade.

At first all that was at stake was the capital invested, or sunk, if that became literally true. Shipowners could also take out liens or mortgages on their vessels, called bottomry bonds. Like an equity loan on terrestrial property, the asset could be seized for non-payment. But if the asset were lost, both the owner and the lender were out.

Insurance represented a different approach: contingent capital. It was pledged by underwriters, but not at risk, and could theoretically be extended indefinitely. Underwriters were literally those who signed their names at the bottom of the policy. The synonym at the time was subscribers. They in turn could lay off part of their risk to others to the point where any one loss, or even a group of losses, could be borne by the wider pools of contingent capital.

Interestingly, marine insurance in Europe developed as a way to protect capital, but around the coasts of what are today India and Pakistan at roughly the same time, it developed as a way to replace capital. Lands bordering the Indian Ocean long had a maritime trading system every bit as extensive as that around the Mediterranean or northern Europe. There was, however, significantly less capital. The loss of a vessel could be ruinous to a fisherman or trader.

Early on British merchants and mariners struck a balance between private and public interests: the club. Groups of traders, ship owners, brokers and investors would pool their resources. The key factor is that all members of the club were known to each other and usually pledged to do business only within the club. In insurance, the similar form is the mutual in which pooled contingent capital is pledged.

"A succession of wars against France from the end of the 16th century had grave effects for both merchant and war vessels," wrote Merkin. That "also led to the wave of financial speculation ultimately stamped out by the Bubble Act of 1720, [which] resulted in a prohibition on the carrying of marine insurance by companies other than the two chartered [ones], The Royal Exchange and London Assurance."

In February 1688, Edward Lloyd's coffee house in Tower Street was referred to for the very first time in the *London Gazette*, according to the official company history, corroborated by historical references. The article declared a reward for five stolen

watches and encouraged anyone with information to contact Lloyd at his shop "in the City." To this day, "The City of London" is the one-square-mile business center, equivalent to the Financial District in Manhattan.

Lloyd's coffee house specialized in information about shipping. At this time, there were more than 80 coffee houses within the City of London's walls, and each claimed its own specialization. By the 1730s, Lloyd's was emerging as the spot for marine underwriting by individuals.

The American Revolution, followed by the Napoleonic Wars, did not see the dire effects on shipping business as had been seen in earlier naval conflict. That helped to substantiate the viability of contingent risk. Just as important, marine insurance proved to be profitable, attracting more legitimate involvement, business expertise and capital.

At least one reference dates the first publication of Lloyd's *Ships Arrived* in 1692 as a news sheet that became *Lloyd's List*. The company itself cites 1734 as the initial publication of *Lloyd's List.*

"The first edition of *Lloyd's List,* one of the world's oldest continuously running journals, was first published by Thomas Jemson," according to the official company history. "He used Lloyd's name and not his own because by this time, the establishment had instant recognition in the shipping community and a dedicated audience who would pay for subscriptions. More than 300 years on, the paper still provides weekly shipping news to London and beyond."

Returning to the question of natural versus human causes for loss, an important trial took place in 1764. It was over a ship built in France and insured by Lloyd's. At the trial after its loss, the vessel was described in a "weak, leaky and distressed condition." The long case determined that a ship must be seaworthy before leaving shore, and that a loss would not have to be paid on an insured vessel "which suffered from a latent defect unknown to both parties to the contract."

Favorable rulings and profitability led to a lowering of standards. "Underwriters at Lloyd's coffee house had enjoyed higher profits in the early 1760s, in part due to the Seven Years' War, but as it came to an end, marine premiums returned to a lower level," according to the company history. "This drove certain underwriters to more speculative lines — putting their names to other kinds of risks, including highway robbery and death by gin drinking — and Lloyd's coffee house soon became notorious as a gambling den. An extract from the *London Chronicle* of the time stated: 'The amazing progress of illicit gambling at Lloyd's coffeehouse is a powerful and very melancholy proof of the degeneracy of the times.'"

A "new Lloyd's" was formed by reform-minded members, supported by legislation and regulation.

In 1799 the economy in the German city of Hamburg was in dire straights, and City of London merchants raised a large amount of capital, mostly in specie, to keep its sister port city solvent. The consignment was loaded onto the Royal Navy frigate *HMS Lutine* and insured by Lloyd's underwriters.

The *Lutine* was driven ashore in the Netherlands by a storm with the loss of all crew and cargo. In 1858 the *Lutine*'s bell was salvaged and hung from the rostrum of Lloyd's underwriting room. Eventually, the bell would be struck when news of an overdue ship arrived — once for its loss and twice for its safe return.

Just two years earlier in England, the North of England Steam Ship Insurance Association (NESSIA) was founded in Newcastle upon Tyne in January 1856, according to the sesquicentennial history of the successor organization, the North of England Protecting & Indemnity Club. NESSIA appears to have been among the earliest clubs founded to insure steamships. Although they had been in use for almost half a century, steamships were still a minority of the British merchant fleet, which then accounted for half of all the world's tonnage.

Some shipowners, especially those in the north of England, bridled at the limited market for insurance, one of the two recognized commercial underwriters — The Royal Exchange and London Assurance — as well as the individuals and clubs in Lloyd's. By 1824 the legal sanction for that triumvirate was ended, and mutual clubs began to grow.

The North of England Iron Steam Ship Protecting Association, its name reflecting the growing development of the steamship, emerged out of NESSIA in 1860.

The ubiquitous intermodal box container was developed by Malcolm McLean in 1956. Opposed by longshoremen, railroads and ship lines, its simplicity and efficiency prevailed, reducing unit costs for retail consumer goods to essentially nothing. But there is a hitch: the efficiency of a pre-packed container means contents are rarely inspected. Flammable or hazardous materials are supposed to be declared, but often are not. As a result, containership fires are not uncommon. The newest massive vessels can carry close to 10,000 40-foot containers, raising new questions about concentration of risk.

Thanks to the haunting ballad by Canadian songwriter Gordon Lightfoot, the wreck of the Great Lakes ore carrier *Edmund Fitzgerald* may be the most famous shipwreck in North America, after the *Titanic*. Many are surprised that a steel vessel, with radar and modern navigation, could founder in a storm, but the *Fitz* went down November 10, 1975. "She may have split up or she may have capsized, she may have broke deep and took water. And all that remains are the faces and the names of the wives and the sons and the daughters."

"Today the P&I clubs, including 13 international groups, represent about 90% of the world's P&I business," said Nick Tonge, deputy director of correspondents at North P&I. "There are a few commercial underwriters that get into P&I, and the business is still growing. Vessels are growing in size."

The most recent set of broad maritime laws pertaining to responsibilities of owners, masters and shippers is the International Convention for the Unification of Certain Rules of Law relating to Bills of Lading, universally known as the Hague-Visby Rules. The original Hague Rules were adopted in 1924, then updated in 1968 and 1979.

Interestingly, several major maritime nations "denounced" the original 1924 treaty; notably the UK, the Netherlands, Finland, Sweden, Denmark, Japan, Australia and Hong Kong. All subsequently accepted the conventions. Today only four nations refuse to acknowledge Hague-Visby: Paraguay and St. Vincent & the Grenadines stand by their 1924 refusal; Lebanon declined in 1924 and again in 1968; Egypt accepted in 1924 then denounced in 1968.

To be clear, Hague-Visby does not set insurance policy or practice. They are international conventions upon which individual insurance companies or clubs base their policy terms and conditions.

Marine insurance has now developed into about half a dozen distinct lines, some reflecting the original and timeless need to transfer risk for vessel and cargo, and some reflecting very modern perils. Tonge explained that P&I insurance covers primarily liability: crew claims, passenger claims, pollution, cargo damage and some collision. The other elemental form of marine insurance is hull and machinery (H&M), the vessel itself. That is handled largely by brokers in the commercial market.

The third line is freight, demurrage and defense that primarily protects charterers. Today vessel owners tend to be investors that lease to operators on various types of time charters. "FD&D indicates what the owner is responsible for, and what the charterer is responsible for, but a lot of disputes still arise," said Tonge.

The other three major forms of modern marine insurance are specialized. There is war-risk cover because acts of war are specifically excluded by both P&I and by H&M. There is also strike cover, to offset expenses arising out of labor disputes by stevedores, pilots and other trades essential to getting vessels loaded and unloaded. And, sadly, there is kidnap and ransom insurance.

For a business practice that dates back millennia, marine insurance continues to develop. The latest element is the newest in all of business: distributed-ledger systems, also known as blockchain technology. While the systems arose out of dodgy crypto-currencies, it is just this year being put to legitimate commercial use by several consortia of steamship lines, underwriters and brokers.

For example, a vessel is supposed to have war-risk cover if it will be passing through a designated war zone. Often insureds choose not to take on that cost, which can be considerable. With satellite navigation and "smart" contracts using a blockchain, a vessel can effectively go on-risk if it enters a danger zone and off-risk when it leaves, with the premium pro-rated for only the actual on-risk time rather than the whole voyage.

But even with such digital developments, marine insurance retains its history. P&I contracts are still renewed on February 20 because that was the earliest date on which Tyneside traders could leave port and cross the North Sea to the Baltic and find it free of ice.

The *Lutine* bell is still run at Lloyd's to herald news of an overdue vessel.

And even on the inland seas of North America, "The legend lives on from the Chippewa on down, of the big lake they called 'Gitche Gumee.' …And the iron boats go, as the mariners all know, with the gales of November remembered."

The author thanks Taryn L. Rucinski, supervisory librarian at the U.S. Court of International Trade, for her insight, diligence and cheerful support in finding and providing research materials. $

Gregory DL Morris is an independent business journalist, principal of Enterprise & Industry Historic Research (www.enterpriseandindustry.com) and an active member of the Museum's editorial board.

Evolution of the Canadian Currency and Banking Systems

By Christopher Kobrak and Joseph E. Martin

Canada had banks and currency before it had a formalized banking system and before it became a country. Its pre-British financial system was shaped by the fact that among the French there was a deep distrust of paper currency. When Canada was a French colony, English sea power often blockaded the St. Lawrence River. In desperation, people used playing cards for currency, from 1685 to 1719 and from 1729 to the 1750s, which led to significant inflation which further undermined faith in paper currency of any kind. While there were no banks in 18th century British North America, merchants played the role of financial intermediaries.

After the passage of the Constitution Act of 1791, there was some progress in the standardization of currency among the colonies. After a few false starts, a banking system was established. Dealing with currency first, a specific problem was that there were two different ratings for currency, one based on Halifax and one based on York (modern-day Toronto), and both were based on foreign coins. The Halifax rating valued one Spanish silver dollar, the most common coin in circulation at the time, at five shillings. The York rating, which was introduced into Upper Canada by Loyalists arriving from the United States, valued that same Spanish silver dollar at eight shillings. Another issue that emerged in the early decades of the 19th century was whether to use dollars and cents, or pounds, shillings and pence. As banks were incorporated, they tended to use both currencies in the Province of Canada, but the Atlantic colonies stayed with pounds, shilling and pence.

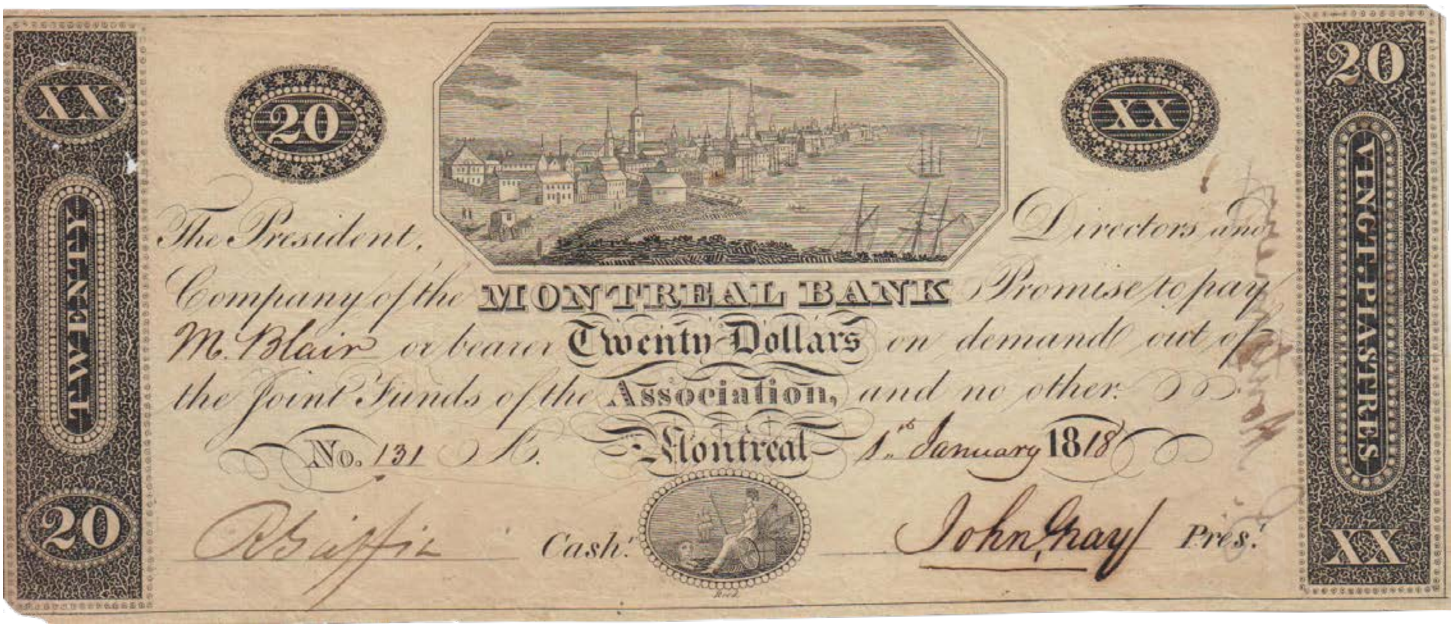
On the banking scene there were two early attempts to found banks in Canada before the first bank, the Bank of Montreal, was established in 1817. In 1792, a group of Montreal-based merchants tried to establish the Canada Banking Company. The attempt was premature in that in Lower Canada there was an objection among French Canadians, based on their experience with playing card currency, to any form of paper money. In the English settlements, while there was need for a bank, there was not sufficient stability.

In 1808, there was another attempt to establish a bank, and the Montreal merchants had support from Quebec City merchants. This attempt failed as well, but copies of the proposed charter survived and were compared with those of the First Bank of the United States (BUS) founded by Alexander Hamilton.

Apart from commercial connections and similar charter language, during the early stages of Canadian banking, Canadians accepted several hallmarks of Hamilton's ideas without question. Meanwhile, some of these ideas were only partly accepted — or not accepted at all — by Scottish and other banking systems. The first was the importance of limited liability, joint-stock banking. Well into the 19th century, most countries allowed only partnerships, with full partner liability, to take deposits and issue notes. Hamilton was one of the first government regulators who encouraged the formation of banks with capital from shareholders, some of whom were sufficiently passive and distant to tolerate full liability for a bank's actions.

Although American and Canadian bankers instituted various schemes to protect the interests of depositors against unscrupulous or incompetent shareholders and managers, limited liability and widespread shareholding was accepted broadly in the United States and completely in Canada. The second key takeaway from Hamilton was the importance of a national banking system. But whereas throughout American history national banking was only performed by a central bank — and that only intermittently — in Canada commercial banks were never restricted to a region or province.

In contrast to the two earlier failed attempts, a great deal of attention has



Collection of the Museum of American Finance

Early $20 bank note from the Montreal Bank, the first bank in Canada, dated January 1, 1818.

been paid to the establishment of the Bank of Montreal (BMO). The founding of the bank was prompted in part by a desire for paper currency, which resulted from experience with army bills during the 1812 War. By 1816, all army bills had been redeemed successfully, creating an urgent need for a replacement currency. In November 1817, the Bank of Montreal opened its doors, with articles of association but without a charter, which it did not obtain for five years.

The key individual involved in the founding of the bank, although he never served on its board, was John Richardson. Born in Scotland, Richardson apprenticed in Schenectady, New York, and established a business in South Carolina. At age 33, he arrived in Montreal in 1787. There he became involved in the western Great Lakes trade. He was also involved in the two earlier attempts to found a bank in 1792 and 1808. The original share capital was fixed at £250,000.

Although the United States had 392 banks at the time, it did not have any banks when its population was 800,000 (as was Canada's in 1817). Also, BMO's share capital was roughly 10 times the American average capital at the time. This was probably due to understandable concerns about bank solvency in light of America's and Britain's recent experiences and the lack of dependable regulation. BMO's founders were conservative in other ways, preferring to avoid the banking model that entailed investing in new speculative ventures, rather than lending short-term funds to established companies.

British North American and American economic affairs were conjoined, which in many ways helped tie the new bank to the United States. America's experiences with banking were proximate and well known, and they seemed more relevant to Canada than those in Europe. Before the building of the Erie Canal, Montreal served as the metropolitan center for much of the trade with Vermont, New Hampshire and New York. Montreal merchants did more business with the United States than Great Britain, and the region's readers looked to Boston journals. Nearly half of the new shares were sold to wealthy families in Boston, New York and Philadelphia, but voting was restricted to Montreal residents and British subjects. The bank founders also looked to the United States for their first notes and the plates on which they were printed, as well as for personnel; the first teller was an American.

Immediately following the establishment of the BMO, a flurry of activity ensued with the founding of four new banks. Two were created in Lower Canada — the Quebec Bank in Quebec City and the Bank of Canada in Montreal, founded by American speculators trying to cash in on Montreal's post-war prosperity. The other two were established in Upper Canada — the Bank of Kingston and the Bank of Upper Canada. However, the first bank to receive a charter in British North America was the Bank of New Brunswick in 1820. By 1822, all five banks in the Canadas had charters, but the Bank of Kingston failed to raise the necessary capital and therefore forfeited its charter. Meanwhile, the Bank of Upper Canada, which was closely associated with the political establishment, did receive its charter, which was closer than any of the others to the Hamiltonian model in that it involved government investment in the bank.

Over the next two decades, several banks came onto the scene with different ownership structures. In Nova Scotia, the Halifax Banking Company was formed in 1825 as a partnership, without a charter, and operated for 50 years, even though two earlier attempts to charter banks — in 1801 and 1811 — had failed. The partners were members of the Halifax establishment and blocked other bank entrants until the modern-day Bank of Nova Scotia obtained a charter in 1832. That same year the Commercial Bank of the Midland

District was incorporated in Kingston. It became one of the two major banks in Upper Canada for the next 45 years.

Five years later, the Bank of British North America, a Montreal-based British bank with a royal charter, arrived on the scene. It quickly established branches in all of the colonies. The Bank of British North America was an example of a British overseas bank, a free-standing company. Many others existed elsewhere in the Empire. The Colonial Bank, for example, was established at the same time but focused on the West Indies with agencies in Saint John and Halifax. These British overseas banks were created in the 1830s. The owners were largely based in the United Kingdom and the goal was to establish overseas branches that were managed from London.

Other Canadian banks were incorporated. Some failed, while others had their charters repealed. By 1840 when the Act of Union was passed, there were 10 banks in the Canadas — five based in Upper Canada and five in Lower Canada. The two largest banks were BMO and the Bank of British North America with branches throughout British North America. Each of these banks had £500,000 plus, in paid-up capital. In the next tier with £200,000 in paid-up capital were Ontario's Bank of Upper Canada and the Commercial Bank of the Midland District and Montreal's City Bank. BMO had three branches in 1840: Quebec City, Kingston and Ottawa, having closed its Toronto branch in 1823. In the 1840s, it added 12 more branches. By way of comparison, in 1837 America had 729 banks for 16 million people, but Canada's bank capital of $12.5 million was roughly equal to that of the United States on a per capita basis, a trend that would continue into the future.

From 1791 to 1841, the Treasury Lords in the United Kingdom controlled colonial banking laws, although in British North America the reporting format was based on the common practice used in Massachusetts. This inevitably led to slow decision making and inappropriate decisions because of lack of understanding of local conditions.

The year 1837 was a difficult time in North America. President Andrew Jackson's decision to veto the extension of the Second Bank of the United States led to loose lending practices in the United States and a significant economic downturn. The contagion spread to Canada, accompanied by poor harvests and political insurrections. As a consequence, banks in Lower Canada, like banks in the United States, suspended specie payment. This lack of convertibility came to Lower Canada earlier and lasted longer than it did in Upper Canada, although no longer than in the United States. However, the Canadian banks did contract credit, which contributed to the economic downturn.

As the period of the separation of the two Canadas drew to a close, the government of Upper Canada made an important decision: it sold its Bank of Upper Canada stock and thereby severed its formal link with that institution. The government did so because it was extremely hard pressed financially and needed the money from the sale of the stock.

But in the third and fourth decades of the 19th century, the Canadian banking system had other, broader problems. Many observers noticed great differences in the availability of credit, population density and property values between New York State and Lower Canada, some of which probably resulted from banking practices. Lower Canada (Quebec) suffered from severe money shortages. There, bank notes did not circulate beyond towns, interest payments were still forbidden by priests and specie hoarding was commonplace. The British Governor General blamed Canada's backwardness on its financial system, singling out the French influence.

With political union in 1841, currency reform proceeded more quickly. This led to a new standardized rating in 1842 for both a British gold sovereign and a US$10 gold eagle. But two other questions emerged. Should Canada adopt a decimal-based currency, and should government-issued paper currency replace or be used side by side with chartered bank currency? In the early 1850s, the colonies decided to keep government accounts in decimal currency, but the British government delayed passage of the legislation until 1854. In the end, the legislation actually allowed both decimal and British units, but it was amended four years later to permit dollars and cents only. The other British North American colonies followed suit, and by 1871 decimalization was the rule.

In 1841, Governor General Lord Sydenham proposed a government issue of paper money, but the proposal was rejected by the Assembly. Since Canada had achieved responsible government, the decision of the elected Assembly overruled the wishes of the British Governor General. In 1860, Alexander Galt, Finance Minister for the Province of Canada, again attempted to establish a government currency, but he was unsuccessful due to lack of support in the Assembly. However, in 1866, the measure was approved, but in a somewhat different form and with strenuous opposition.

Unlike Galt's 1860 proposal, in this case the banks were not required to give up issuing their own currency. Reform leader George Brown strongly opposed this measure because he felt it would be "ruinous to banks… It was far more important that capital should be easily available to 'industrial interests' than it be kept for the exchequer through the government note scheme, just so that the finance minister need not borrow abroad."

In 1850, Francis Hincks, the Inspector General and future Minister of Finance of the new Dominion of Canada, followed the example set in New York State by introducing free banking into Canada. Free banking permitted the establishment of a bank with no branches without an examination of the suitability of the applicant. This was frowned upon in the United Kingdom, and few such banks were established. But the failure of free banking in Canada compared to its success in the United States relates less to Imperial influence and more to the fact that in Canada free banks had to compete with chartered banks; in America they did not. Another indication of the growing autonomy in the Canadian colony was Galt's decision to appoint a select committee on banking and currency in 1859.

Canadian banks experienced two major economic downturns during this time — the crisis of 1847 and the collapse of 1857-58. While there were no banking failures in 1848, the banks' cautious approach to lending during the crisis contributed to hardships felt by farmers and merchants. Blame was cast on the banks. The Collapse of 1857 and the following depression of 1858 is often referred to as the first worldwide depression. The boom in the mid-1850s and the subsequent crash in 1857 took a particularly harsh toll on banks in Canada. The banks restricted their operations, which allowed them to avoid or delay suspensions.

Canadian Banks, 1841–67

	1841	1851	1861	1871
Number of banks	9	8	16	19
Currency	£	£	$	$
Capital stock paid up [000]	2,276.7	2,897.6	24,411.0	26.618.7
Liabilities				
Promissory non-interest bearing notes	919.0	1,623.4	11,780.4	8,312.4
Cash deposits bearing interest	54.9	565.3	9,545.3	14,765.9
Cash deposits not bearing interest	786.5	1,623.4	9,176.0	13,938.4
Balances due other banks	340.8	271.6	444.1	2,771.9
Net profits or contingent funds	146.4	59.8	0	0
Dividends unpaid	21.0	0.9	0	0
Total other than stock	2,268.6	3,647.5	30,945.8	39,788.6
Assets				
Notes and bills discounted	3,282.2	5,574.0	39,588.8	48,158.4
Coins, bullion and provincial notes	392.5	413.4	4,960.4	7,384.2
Balances due from other banks and foreign agencies	203.6	218.5	4,157.3	5,068.6
Other debts due to the bank not included elsewhere	0	0	4,064.4	2,297.4
Government securities	24.7	43.8	2,736.0	6,142.6
Landed or other property of the bank	46.1	135.3	1,429.3	1,510.6
Promissory notes or bills of other banks	148.3	144.4	1,136.2	1,651.8
Total	4,097.4	6,529.4	58,072.4	72,213.6

Source: Breckenridge, page 85

Adam Shortt argues that the bank's restriction of operations may have done more damage than a temporary suspension of payments would have because it brought legitimate trade to a standstill, preventing a recovery. He contrasts this with the United States banks, which suspended payments but managed to facilitate a recovery under normal trade conditions without abnormal restrictions of their discounts. The Panic of 1857 is cited as the beginning of the end for the Bank of Upper Canada, the oldest bank in Ontario, which failed in 1866.

The Canadian banking system grew and prospered in spite of the panics. While there were no new banks until the mid-1850s, by 1867 there were twice as many banks as there had been a quarter century earlier. In 1868, the Commercial Bank was absorbed by the Merchants Bank, and there were a number of other smaller failures, including: the Zimmerman Bank; the Bank of Western Canada, which was wound up in 1860; the Bank of Brantford, withdrawing from business in 1863; and the short-lived International and Colonial Banks in 1859. All of these failures were caused more by "mistakes and misapprehensions, peculiar to the institutions directly involved" rather than to "world-wide…financial and speculative upheavals."

The accompanying table provides a picture of Canadian banking progress between 1841 and 1867. The dramatic growth as evidenced by the increase in paid up capital stock is striking. A notable feature is the shift from British pounds (£) to Canadian dollars ($). On the liability side, what is most striking is the dramatic increase in deposits, particularly those bearing interest. On the asset side, what is noticeable is the increased diversification. While discounted notes and bills are still the major asset class, there has also been terrific growth in government securities. What is less obvious is the need for flexibility in notes because of the highly-cyclical nature of the economy with demand peaking in September and October and the trough typically occurring in May. Another feature to note is the dramatic increase in government securities, often to support railway enterprises.

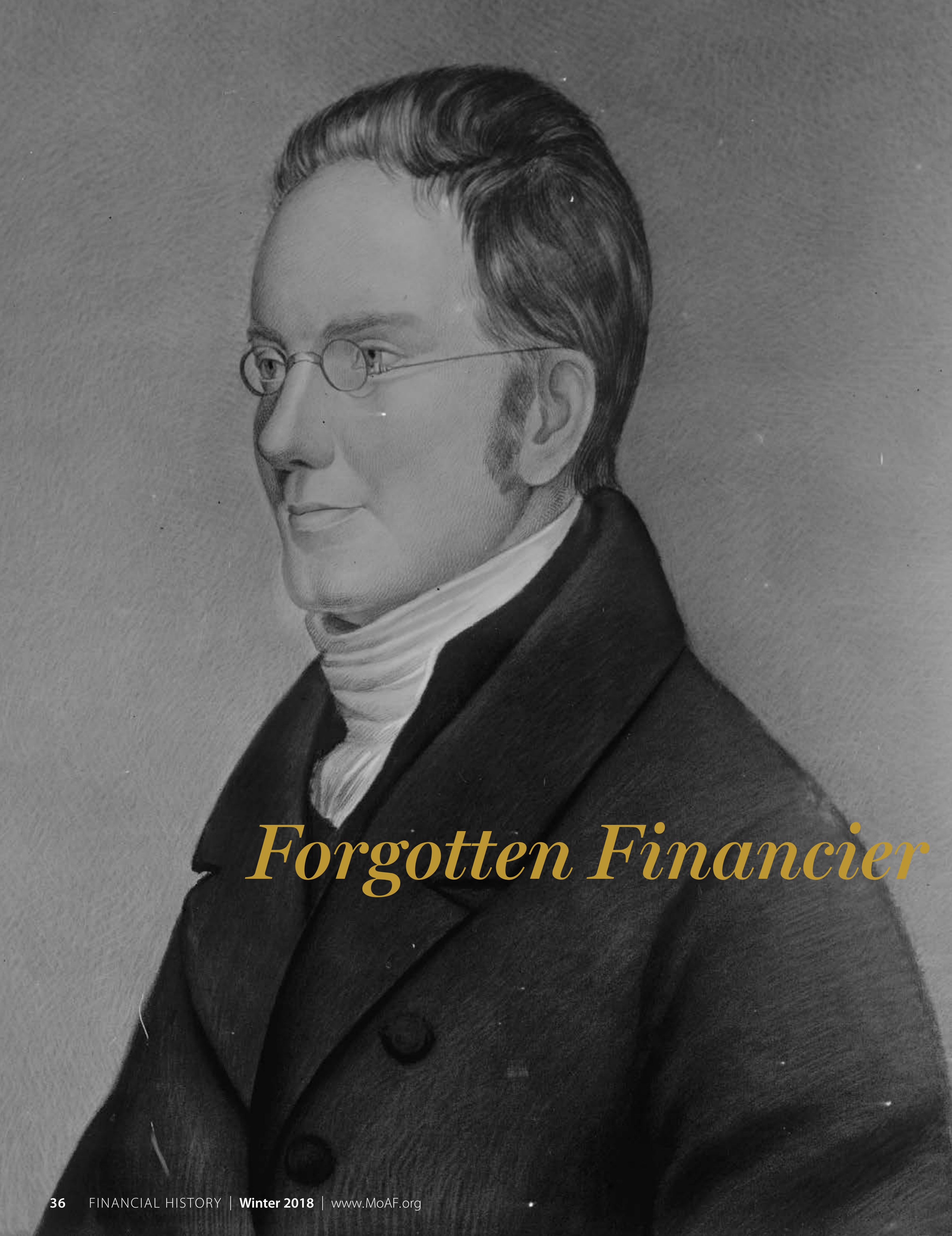
Another notable feature was the dramatic increase in bank branches from just a handful in 1840 to well over 100 in 1867. Most of the branches were in Ontario with less than a dozen in Quebec, nine in the Maritimes and two in British Columbia, which was not yet part of Canada. The Bank of Montreal alone accounted for over one-third of all branches — primarily in Ontario, but by 1867 in Atlantic Canada, including St. John's and Halifax. $

The late Christopher Kobrak was the first Wilson/Currie Chair of Canadian Business and Financial History at the Rotman School of Management at the University of Toronto and a professor of finance at ESCP Europe, Paris. An international fellow at the Centre for Corporate Reputation, Oxford University, he served on the editorial boards of several business history journals.

Joe Martin, formerly the partner in charge of a large Canadian management consulting firm, is the director of the Canadian Business & Financial History Initiative at the Rotman School of Management at the University of Toronto and president emeritus *of Canada's History Society. He currently serves as the founding president of the Canadian Business History Association.*

This article was adapted from the forthcoming book, *From Wall Street to Bay Street: The Origins and Evolution of American and Canadian Finance,* by Joe Martin and Chris Kobrak (Rotman-Utp Publishing, May 2018).

Editor's Note: For more on Canadian banking, see *Bank of Montreal Bicentennial* (FH #120, Winter 2017) and *Profit From Prudence: How Canadian Banks Avoided the Recent Finance Crisis* (FH #106, Spring 2013).



Forgotten Financier

Langdon Cheves

By Clyde Haulman

By the summer of 1818, the future of the recently-chartered Second Bank of the United States was in serious doubt. Created by Congress in 1816, the Bank began its operations in early 1817 as the boom following the War of 1812 was underway. Fueled by a combination of European economic recovery, the opening of trade following the Napoleonic Wars and poor crop yields in Britain and Europe, demand for American agricultural products, particularly cotton, rose dramatically driving up their prices. This, along with the closing of the threat posed by the British and Native Americans on the frontier, increased the demand for southern and particularly western lands dramatically. The government's easy credit policy for land purchases aided this expansion of demand as public land sales rose 37% between 1815 and its peak in 1818. The export trade, transportation (particularly shipbuilding and western riverboat construction), banking and insurance all prospered as well.

As the boom came to a halt in mid-1818, the Second Bank was caught dramatically overextended and unable and/or unwilling to reign in its activities. In early 1819, the Board appointed Langdon Cheves of South Carolina its new president with the belief he could save the Bank.

Chartered with the objectives of restoring confidence in the currency and bringing order to Treasury deposits and payments, the establishment of the Second Bank was a response to a variety of circumstances including the disastrous financial consequences of the failure to re-charter the original Bank of the United States in 1811. Difficulties of funding the government's activities during the War of 1812 without a national bank consisted of problems issuing bonds and Treasury notes, halting interest payments on US debt in Boston, foregoing redemption of Treasury notes in other northern cities and suspending specie payment following the capture of Washington. Further exacerbating the situation was the rapid expansion of state-chartered banks to fill the void created by the disappearance of the national bank. In the year following the demise of the First Bank, the number of state banks increased 22%, and by 1816 there were 232 state banks, almost double the number in 1811.

With Treasury operations in disarray and a currency consisting of over-issued, mostly non-convertible state bank notes, supporters of a national bank pushed to overcome the objections of hard money interest. After seven tries over a two-year period, a charter for the new bank was secured. However, its first two years of operation under Bank President William Jones were characterized by a combination of the growing nation's insatiable demand for specie, mismanagement, speculation and fraud.

Stock in the new bank was fully subscribed, in part thanks to Philadelphia banker Stephen Girard, but few of the sale's proceeds were in the form of specie. A large part of the subscription consisted of US obligations and at the Philadelphia and Baltimore branches, balances from the Bank itself were used to make payments with those balances being created on the security of the Bank's stock being purchased. To address the Bank's weak specie position, Congressman John Sergeant was sent to London where in 1817 some $2 million was obtained followed by almost $8 million the following year.

In spite of the inflow of specie, the nation's demand was not met, and on February 20, 1817, when Congress required all payments to the Treasury be in specie or its equivalent, the problem became acute. State banks that had wanted to wait until July to resume specie convertibility were persuaded to do so in February when the Bank agreed to expand discounts by $5 million in New York, Philadelphia, Baltimore and Virginia, an expansion of credit that contributed to the speculation in southern and western lands.

By following through on its promise, the Bank added to the rapidly-expanding money supply, and its action took pressure off state banks to limit their expansions. As a result, Treasury receipts particularly from speculative land sales accumulated in the southern and western branches of the Bank. In order to satisfy eastern creditors, Treasury transfers created a massive flow of bank notes eastward. By mid-1818 the Bank's eastern branches refused to redeem in specie any notes but their own, including notes of other branches. To help reduce the speculation in land and stem the flow of bank notes to the East, in July 1818 directors of the Second Bank ordered branches in Philadelphia, Baltimore, Richmond and Norfolk to reduce their discounts by $5 million.

Mismanagement of the Bank by President Jones and the Board further exacerbated the situation. Although they considered the Bank and its branches a single entity, no attempt was made to establish capital limits for each branch. Such action would have forced each branch to periodically settle its accounts as notes issued and drafts sold pushed them against the capital limit. Further, branches often renewed notes over and over again, made loans on mortgages, allowed individuals to pay off bills by creating new bills (so called "racehorse" bills) and did not ensure borrowers had the means to redeem the notes and drafts issued.

In addition, the Bank and its branches did not use their power to curb state banks and their note issues, thus creating a substantial over issue of often non-convertible state bank notes. Because state banks typically had large balances of their notes at the Bank, the Second Bank could have easily returned them periodically for redemption, demanding specie for the notes. Facing such a possibility, state banks would likely have limited their note issue rather than face acknowledging their lack of specie, thereby enabling the Bank to keep control over the notes issued by the state banks. Adding to the problem, the officers and boards of the southern and western branches were, as one author suggests, "incompetent and disobedient." In spite of their failure to respond to orders from the Second Bank's Board, no steps were taken to control them or to remove them from their positions.

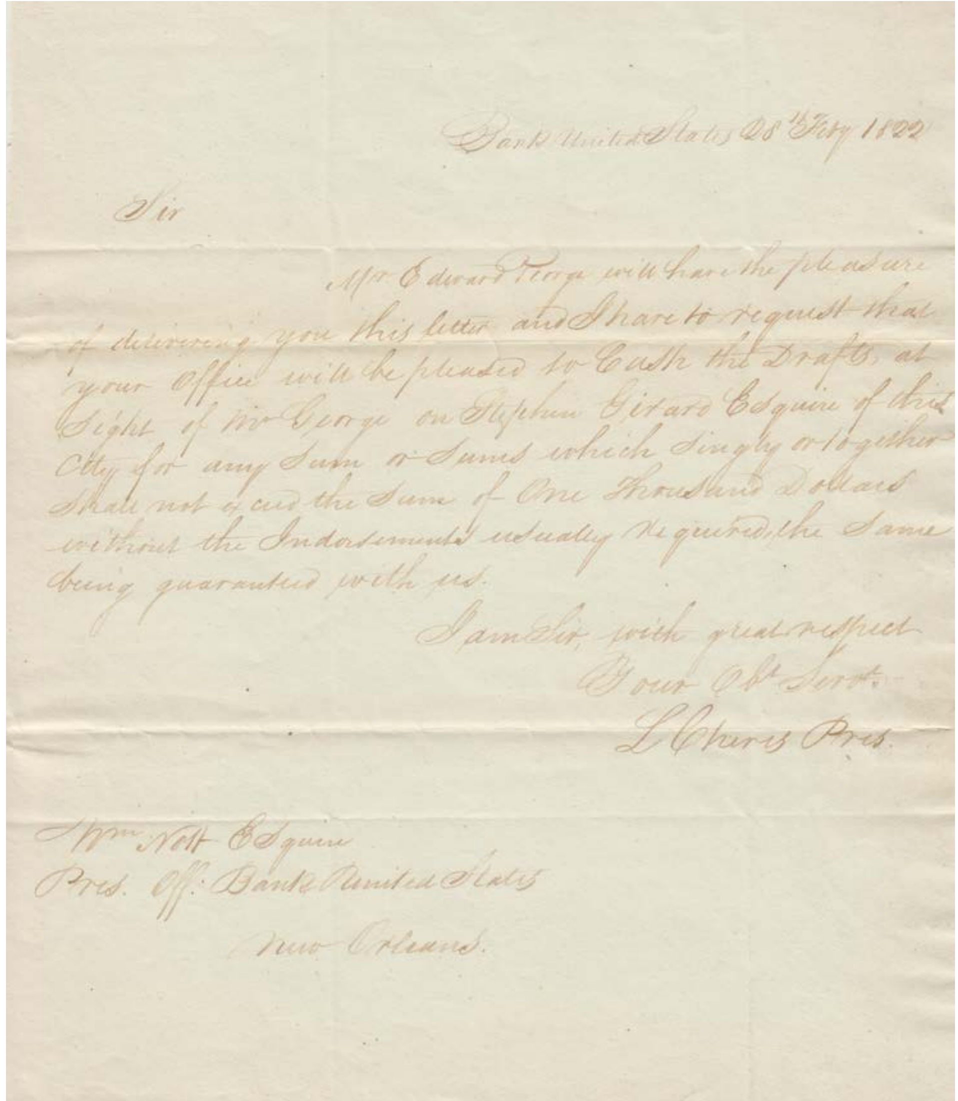
Widespread speculation in its stock and — particularly at the Baltimore branch — outright fraud, compounded

Portrait of Langdon Cheves photographed by Harris & Ewing, circa 1905.

the problems facing the new Bank. The charter required that payment for Bank stock be made one-fourth in specie and the remainder in government securities or specie. Because of the premium on both specie and Treasury issues that existed at the time, this stipulation was often bypassed with the Bank accepting promissory notes secured by its own stock in payment. This meant that the Bank received neither the specie nor government securities it should have and began its operations in a weakened position.

Further, in an economy rife with speculation, it opened the way for an intense round of Bank stock speculation. This was particularly evident in Philadelphia and Baltimore, where a small group of individuals controlled much of the Bank's stock and used their position to manipulate the stock's price. Among the policies utilized was allowing stockholders to borrow on their stock holdings at a 25% premium. Because of this advantage, at times the Bank's stock traded in the market at a premium of 50% or more.

Baltimore branch President James A. Buchanan, Cashier James W. McCulloch and Director George Williams were primary participants in the stock speculation and engaged in outright fraud. They accomplished this by giving "themselves the sole right to discount loans on pledges of stock, by lying to the local board of directors, by false entries in the books of the branch, by false reports to the bank at Philadelphia…" In early 1819 the scheme came crashing down at a cost of over $1.4 million to the Bank.



Bank United States 28th Feby 1822

Sir

Mr Edward George will have the pleasure of delivering you this letter and I have to request that your Office will be pleased to Cash the Drafts at Sight of Mr George on Stephen Girard Esquire of this City for any Sum or Sums which singly or together shall not exceed the Sum of One Thousand Dollars without the Indorsements usually required the Same being guaranteed with us.

I am Sir, with great respect
Your Obt Servt.
L Cheves Pres.

Wm Nott Esquire
Pres. Off: Bank United States
New Orleans.

Collection of the Museum of American Finance

Correspondence letter from Langdon Cheves to the head of the Bank of the United States in New Orleans directing him to cash drafts on Stephen Girard, dated February 28, 1822.

By the end of 1818, this mismanagement and fraud put the Bank in dire straights. Accommodations had fallen over 15% since July, and circulation had fallen some 22%. With specie holdings low relative to demand liabilities, when a call came in October from the Treasury for $2 million in specie to pay Louisiana Purchase obligations, the Bank could not comply. The Treasury had to settle for drafts on London instead.

That same month the House of Representatives instructed a committee to investigate the Bank, and its report in January 1819 spelled the end for President Jones. The report — combined with the losses suffered by the Bank from malfeasance — pushed it to the brink of failure. Popular opposition led to state efforts to tax the Bank's branches and only Supreme Court decisions in the cases of *McCulloch vs. Maryland* and *Osborn vs. Bank of the United States* saved the Bank from being taxed out of existence.

In late January 1819, Jones, encouraged by President Monroe, resigned his office. Backed by a group of Charleston, South Carolina, stockholders who had formed committees of correspondence with stockholders in other states, Langdon Cheves was elected to succeed Jones as president of the Second Bank in March 1819.

Cheves brought a distinguished record to his new position. He had begun public service as a member of Charleston City Council in 1802 and was elected to the South Carolina House of Representatives later that same year. He was appointed Attorney General of the state from 1808-1810 before being elected to the US House of Representatives in 1810. There he strongly supported the War of 1812, chairing the Select Committee on Naval Affairs. He then chaired the Ways and Means Committee before being elected Speaker of the House in January 1814 and serving until he decided not to seek re-election in 1815.

With the country in the midst of a deepening depression and the Bank blamed for much of the resulting misery, Cheves began putting together a plan to restore the Second Bank's solvency and to place its operations on sound footing. In addition, he immediately reduced salaries and cut operating expenses, dealt with the revelations of mismanagement and fraud with "investigations, dismissals and prosecutions" and orchestrated the appointment of new officers and directors.

Presenting his proposals to the Board in early April, Cheves focused on six actions that he felt were needed. The first three addressed the problem of the Bank's over-issue of notes — particularly in the South and West — that had led to the flood of bank notes flowing to eastern branches. He proposed that southern and western branches note issue be restricted and that they be instructed to issue no notes larger than \$5. The parent bank was to enforce the order by stopping its purchase and collection of exchange from these regions.

Additionally, the reductions in loans ordered in July were to continue and the Treasury was to be asked to provide advanced notice of its intent to withdraw funds from a location that had no government deposits, thus giving the Bank time to make the necessary transfers to meet the Treasury's needs.

To rebuild the Bank's specie holdings, Cheves proposed that balances due from state banks be reduced quickly and collected in specie. He also initiated an effort to obtain specie abroad, ultimately borrowing \$2 million in London and Amsterdam payable in three years. The final element of his plan also protected the Bank's specie holding by requiring that "debentures be paid in the same currency for which they were originally issued."

On April 9, the Board approved the plan. Implementation began immediately including, importantly, the Treasury's agreement to give the requested advanced notice of withdrawals. The impact was swift, and by the end of May the crisis was over and the Bank secure in its position.

Dealing with capital issues required longer-term actions. Cheves ordered that dividends should be stopped until the Bank's original capital was restored, much to the dismay of many stockholders. It took until January 1821 for the Board to determine that previous losses had been covered and that the capital stock was restored. At that time a dividend of 1.5% was declared.[1] Cheves set November 1, 1819, as the date which branch capital was to be fixed. Although these levels were provisional, combined with the other actions, they helped to bring order to the institution's operations.

Saving the Bank with his initial actions and ensuring its continued health by pursuing on-going restrictions on the Bank's ability to make loans and expand its note issue did not win Cheves many friends among stockholders, with state banks and their supporters and, most importantly, among the public and many politicians. As William Gouge suggests in his 1833 work, *A Short History of Paper Money and Banking in the United States*, "The Bank was saved and the people were ruined."

Adding to Cheves's problems was his lack of experience as a banker. While pursuing restrictive actions on many fronts, he also continued some practices of his predecessor, including discounting notes for long durations and making loans on the security of the Bank's stock. Such actions combined with the animosity existing toward the Bank and Cheves meant that, as Historian Ralph Catterall suggests, Cheves "had exhausted his usefulness to the institution."

Analyzing the impact of the restrictive policies pursued by Cheves, economic historian Edwin Perkins finds that "the monetary policies he pursued after the crisis [The Panic of 1819] had materialized were inappropriate." An institution the size of the Second Bank with the power to determine the money supply could have used some of its accumulated specie reserves to expand notes and deposits. Perkins indicates that the Bank had accumulated over \$7 million in specie by the end of 1820 and that "at least \$4 million of that total represented excess reserves…"

Had these been used to back additional notes and deposits, Perkins estimates that the country's money supply would have increased by as much as 17%. As a result, Perkins suggests that Cheves and the Second Bank "could have alleviated much hardship, prevented hundreds of failures and bankruptcies, and perhaps led the country out of the recession before it became a depression."

In his five years as president of the Bank, Cheves had accomplished much — pulling the institution from the brink of ruin and putting its operations on sound financial footing. However, this success came at a heavy cost. Facing continued hostility from state banks resulting from his policies and facing increasing opposition from directors and stockholders resulting from his restrictive policies and low dividends, Cheves, believing his work was done, retired in October 1823. The Bank's new president, Nicholas Biddle, inherited a stable, sound institution but one, as he would learn, that carried the burden of its tumultuous beginnings and of Cheves' restrictive policies.

After leaving the Bank, Cheves continued living in Philadelphia, his wife's hometown, and later in Lancaster before returning to South Carolina in 1829 to supervise his rice and cotton plantations and enjoy his large family. Besides serving as a commissioner on the Board established to settle the claims of American citizens resulting from the War of 1812 and representing South Carolina at the 1850 secession conference at Nashville, Cheves was "done with politicks and public life." $

Clyde Haulman is professor emeritus *of Economics at the College of William and Mary. He studies the early national economy and the development of American economic thought, and he is the author of* Virginia and the Panic of 1819 *(2008, Chatto and Pickering).*

Note

1. Dividends paid prior to Cheves assuming control of the Bank and halting dividend payments were: July 1817, 2 6/10%; January 1818, 4%; July 1818, 3½%; and January 1819, 2½%.

Sources

Catterall, Ralph C. H. *The Second Bank of the United States*. Chicago, IL: University of Chicago Press. 1903.

Gouge, William M. *A Short History of Paper Money and Banking in the United States*. Philadelphia, PA. 1833.

Hammond, Bray. *Banks and Politics in America from the Revolution to the Civil War*. Princeton, NJ: Princeton University Press. 1957.

Haulman, Clyde A. *Virginia and the Panic of 1819*. London: Pickering and Chatto. 2008.

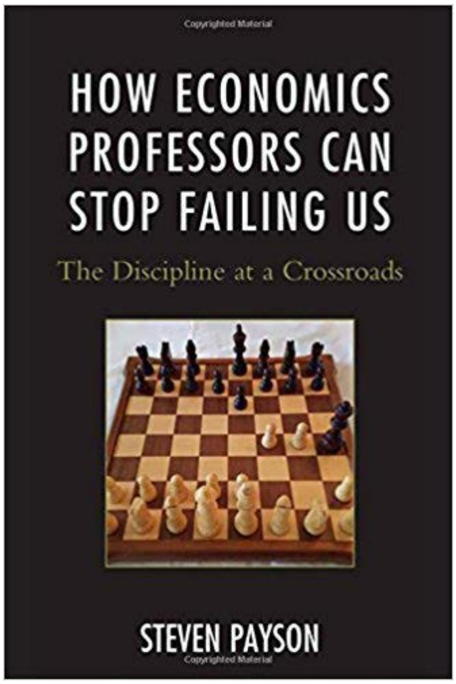
Huff, Archie Vernon, Jr. *Langdon Cheves of South Carolina*. Columbia, SC: University of South Carolina Press. 1977.

Knodell, Jane Ellen. *The Second Bank of the United States: "Central" Banker in an Era of Nation Building*. London: Routledge. 2016.

Perkins, Edwin J. "Langdon Cheves and the Panic of 1819: A Reassessment." *Journal of Economic History*, 44:2. pp. 455–61.

Smith, Walter B. *Economic Aspects of the Second Bank of the United States*. Cambridge, MA: Harvard University Press. 1953.

Temin, Peter. *The Jacksonian Economy*. New York: Norton. 1969.



How Economics Professors Can Stop Failing Us: The Discipline at a Crossroads

By Steven Payson
Lexington Books, 2017
372 pages
$110

Readers are undoubtedly familiar with the principle of *caveat emptor*, or buyer beware, which especially holds true when buying securities or insurance. But what about *caveat lector*, or reader beware? Scientific findings, it turns out, are not ironclad truths, but claims about the real world that may be overturned as new evidence comes to light or as better theories imbue new meaning on old data. (The most delicious example of this phenomenon may be the scientific understanding of chicken eggs, which went from being nearly poisonous to a super food during my lifetime.)

As veteran government economist Steven Payson shows in *How Economics Professors Can Stop Failing Us*, economists also publish findings of dubious merit or limited longevity. While the basic tenets of economics — supply and demand, opportunity cost, and so forth — remain safe for the present, conclusions reached in the rarified world of theoretical economics, which is often leveraged by policymakers and investors to guide difficult decisions affecting millions of people and billions of dollars, are hardly immutable. Many articles, *especially* those published in top economics journals, are, Payson explains, written solely to impress search, tenure, grant and prize committees, not to expand knowledge of the real world or to improve economic theory.

Economists know this, Payson claims, but note that they have no incentive to challenge the status quo and, like the naked Emperor and his advisors in the Hans Christian Andersen story, fear being labeled simpletons if they do not fall into line and comment on how resplendent or elegant a model is, no matter how silly or irrelevant the exercise.

It used to be that economists had too many arms (they were always telling President Truman "on the other hand this, on the other hand that"), but now they have too many dubious models, which proliferate because journals do not effectively screen out arcane or inane submissions. Most peer review is *de facto* single blind, Payson explains, meaning that the editors and reviewers know the identities of submitters. Publication decisions, therefore, do not need to be based on the objective quality of the submission but can be, and Payson believes often are, decided upon the basis of the author's professional connections and *quid pro quo* arrangements.

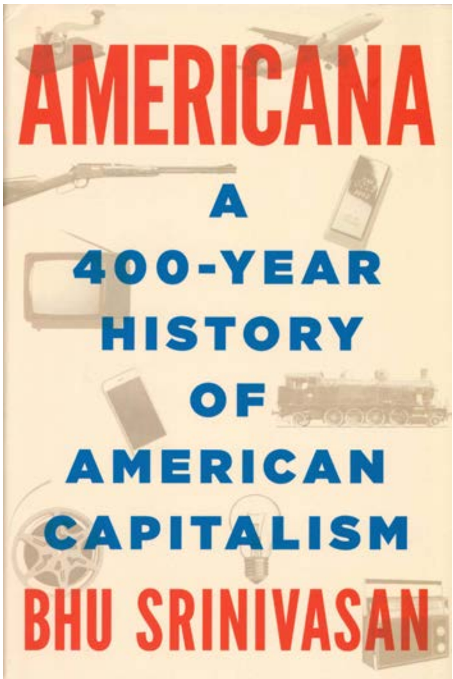
The evidence, he says, is in the articles themselves, many of which hinge on unrealistic assumptions, rely on tests of statistical significance instead of real world significance, omit crucial variables and employ junk or *even fake data*. Authors purposely employ fancy mathematics to hide the charade, but most of the econometric heavy lifting is simply adapted from earlier work.

Thankfully, no knowledge of advanced mathematics is required to read Payson's book or to understand his examples, which he carefully and artfully explains with words and pictures. Payson's tone is often playful and irreverent. Clearly, he has had enough of the situation, which he considers a socially expensive game. Not only are intelligent people wasting inordinate amounts of their time on frivolous problems, like the economics of sport, as well as the time of the naïve people who read their work, many economists are essentially perpetrating a fraud on their employers, students, policymakers and funding sources, from the NSF to the Koch Foundation. Payson calls on economics departments to self-regulate and for individual economists to spend more time thinking about the ethical implications of their bogus economic model building and pseudo-scientific hypothesis testing.

Until reforms are implemented (and if past experience is any indicator, they never will be), investors and policymakers always need to remember to think for themselves. If an argument, conclusion or model seems off, it may very well be, even if it was written by some economic demigod in the most prestigious journal in economics, whatever that may be. (Payson has some choice words for journal rankings as well.)

Some theoretical economics articles may help investors to beat the market or policymakers to prevent another financial meltdown but many, even most if Payson is right, are simply exercises in applied mathematics with little discernible connection to the actual economy. That is why most economists were taken aback when crisis struck a decade ago. *Caveat lector!* $

Robert E. Wright is the Nef Family Chair of Political Economy at Augustana University in South Dakota and a member of the Financial History *editorial board. He is the co-author, with MoAF Chairman Richard Sylla, of* Genealogy of American Finance *(2015) and the author of several hundred other articles, books, reviews and talks about business, economic, financial and policy history.*



Americana: A 400-Year History of American Capitalism

By Bhu Srinivasan
Penguin Press, 2017
560 pages. with notes, bibliography and index
$30.00

"When in the Course of human events…" Say that out loud just once, and you'll realize that Thomas Jefferson wasn't writing for only a 1776 audience. Our Founding Fathers wanted all to know that this new nation would be based on the highest philosophical and legal principles: Liberty. Freedom. Justice. These are our touchstones. And the path of our republic has been the expansion (too many times slowly and painfully) of the rights outlined in our founding documents to previously disenfranchised groups. We are a nation founded and steered by principles.

But you can't live on principles alone, no matter how high-minded. Among the list of grievances against the British Crown, Jefferson made sure to include "For cutting off our trade with all parts of the world." The Constitution never mentions the word slavery, while coinage, counterfeiting, interstate commerce, patents, taxes, trade and a host of other commercial issues are detailed. For Americans, the freedom to follow their business instincts (and the wealth that hopefully follows) are core to our country's establishment, its success and its history.

Entrepreneur Bhu Srinivasan, in *Americana: A 400-Year History of American Capitalism*, is out to make sure that we don't forget how central business and capitalism are to America. This is familiar ground for most readers of this magazine. But the writing is fresh, the pace is brisk and there are enough personalities and anecdotes to keep any business history enthusiast happy. In addition, there are two themes that recur in the book that I give him credit for discussing in the manner that he does — one is the historic role of government activity in the economic sphere, and the other is the issue of race.

The story begins in Holland in 1616, where English Pilgrims in exile decided to relocate to the New World. Securing the resources they needed meant navigating the tricky, quasi-official, never-quite-as-it-seemed venture capital world of 16th century London. The city was awash with dodgy, mostly failed schemes to exploit the untold riches of the Americas. The Pilgrims struck a deal, made their move and, foreshadowing so many speculative deals, ultimately fell out with their backers. Thus was modern capitalism brought to America.

The author moves quickly through the colonial era, focusing on agriculture (particularly tobacco and cotton) and the debt and slave culture that accompanied them. Around 1800, the story picks up steam — literally — as transportation is revolutionized through Fulton, Vanderbilt, canal fever and ultimately railroads. Easier movement, accompanied by immigration, a gold rush and the telegraph opened the country up. Srinivasan makes it clear that the speed with which these developments occurred would not have been possible (then or now) without the government seeding innovation and risk through legislation and financing.

A pivot point for the century was the Civil War. Using 1859 slave auction data, the author shows that no financial payoff could have satisfied slaveholders, as the economic "value" of the slave population dwarfed the size of any other national asset, including the entire federal budget. The price of slavery had to be paid in blood. The decades following the War saw innovation and capitalism gather momentum — in energy, consumer products, steel, publishing and labor. The agrarian phase of America's development had given way to the industrial.

The focus of *Americana* shifts as the 20th century opens, with rising wealth creating new opportunities for business. Here the author uses personalities to explain the entrepreneurial drive behind the creation of a consumer economy: Ford and the automobile, Sarnoff and the radio, movie moguls and film. The author has a sense of humor: bootlegging (starring Al Capone) gets its own chapter and comes just before the section on banking. A coincidence I am sure.

War again plays a big part in the story, as returning GIs spur another wave of spending on roads, real estate and entertainment. Computing technology — the basis for so much of today's economy — was started largely to fill the needs of government in counting heads, paying benefits and building a vast defense industry. No discussion on current business and capitalism can be had without mentioning Steve Jobs, who gets his due as the book closes.

There is a lot of American business between the Pilgrims and Steve Jobs. Four hundred years is a long time. I wish that more had been written on boom and busts beyond just the 1930s, and healthcare over the past 40 years deserved coverage. However, this takes nothing away from an excellent treatment of how our economy got built, sector by sector.

Srinivasan clearly loves the vibrancy and the freedom that are the core of our country and our markets, and his enthusiasm and respect are reflected in this well-researched, well-written book. $

James P. Prout is a lawyer with 30+ years of capital market experience. He now is a consultant to some of the world's biggest corporations. He can be reached at jpprout@gmail.com.

An Opportunity of a Lifetime

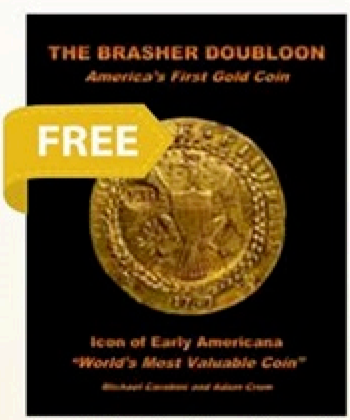
AMERICA'S FIRST GOLD COIN

The 1787 Brasher Doubloon Offered for $7.9 Million

Join an elite group of custodians the likes of the DuPont family, Yale University, Colonel Green, John Work Garrett, and Virgil Brand… and own the Finest Known Specimen of America's Most Famous Numismatic Treasure.

The 1787 Brasher Doubloon has been referred to as the "World's Most Valuable Coin" for well over a century. It has set many world records at public sale dating as early as 1887. For the first time in over century, this finest known specimen is being offered privately. The next owner of this historic piece of Early Americana will join a long list of prominent American citizens.

History in your hands.



Learn the Amazing Story of America's First and Most Valuable Gold Coin.

Discover the rich history of America's Greatest Numismatic Treasure– Call today to receive your FREE copy of *The Brasher Doubloon*!

As a friend of the American Museum of Finance you are entitled to receive a FREE copy of *The Brasher Doubloon* from Monaco Rare Coins Vice President and Author, Adam J. Crum. This historical text chronicles the provenance and history of all seven known specimens of America's first gold coin.

"If asset appreciation is one of your objectives when you are acquiring rare works of art, rare coins or rare artifacts… then you have to acquire the very best…and this Brasher Doubloon is undoubtedly the very best." Adam Crum

MONACO RARE COINS

Call us today at 800-996-9887

4900 Birch Street · Newport Beach, CA 92660 · www.MonacoRareCoins.com